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On the Causes, Symptoms, Morbid Anatomy, and Treatment of some of the principal Diseases of the Southern States. By SAMUEL A. CARTWRIGHT, M.D. of Natchez.

ESSAY II.

ART. I. *On Malignant* Fever.*

(CONTINUED FROM PAGE 44.)

MY former essay contained a history of the malignant or yellow fever of Natchez, in 1823. Since that was written, having personally witnessed the yellow fever of 1825, in Natchez 'Under the Hill;' in Washington, a village six miles from the river Mississippi; at Haughton's, a tavern in the country; and, lastly, in Natchez 'On the Hill,' I propose in the present essay, to give a statement of whatever additional facts, relative to its causes, nature, and treatment, that its occurrence and prevalence in all these places have afforded me an opportunity of observing. It was mentioned in my former essay, that Natchez landing, (or 'Under the Hill,' as it is called,) consists of a few rows of buildings, situated immediately on the brink of the Mississippi river, at the foot of a bluff about two hundred feet high, which forms the site of the principal part of the city, called Natchez 'On the Hill.' Although during *high water*, the buildings under the hill are immediately on the brink of the river, yet when the river falls, as it always does in summer, a surface of ground several rods in width, becomes uncovered between

* By the term malignant fever, I mean no other disease whatever, but yellow fever.

the buildings and the river. The surface, thus exposed by the falling of the river, consists of mud recently deposited, and of the debris of various vegetable and animal substances, which, during the season of trade, had been thrown out by the *flat-boats* that landed at this place. On the margin of this uncovered surface, there is a warehouse, which in the months of July and August, 1825, contained a large quantity of spoiled porter and sour pork. The owner of the warehouse was constantly engaged in repacking the pork; the brine from which, was permitted to run through the floor into a kind of cellar, which had no outlet to it. Some of the porter barrels bursted, and the spoiled porter also run through the floor into the cellar, with the brine from the sour pork.

Some few hundred yards above the warehouse there was a boat containing a quantity of rotten corn, which had been sunk in the water, but became exposed in the summer, by the falling of the river; and below the warehouse, but not so far from it, there were two or three houses that contained stagnant water, others, putrid sour-krout, fish, oysters, &c. in their cellars. The medium heat of July, at 5 o'clock in the morning, was 76° of Fahrenheit; and at 4 o'clock in the evening 86°. July contained twelve rainy days. The three preceding months had contained no less than thirty-three rainy days. The medium heat of August, at 5 A.M., was 76° and at 4 P.M., 91°. In August, there were eleven rainy days, and the 7th, 8th, 9th, and 10th, the 15th, 16th, and 17th days of that month were calm.

On the 21st of August, Mr. John Orr, who had been *daily occupied* in the above mentioned warehouse, fell the *first* victim to the yellow fever of 1825. He was sick but a few days, and died with black vomit. I saw him the day before he died, soon after he had vomited a large quantity of black matter. Mr. Orr, immediately on being taken sick, was brought into Natchez 'On the Hill,' and was waited on, nursed, and attended by a family, none of whom took yellow fever. On the 30th of August, Mr. Joseph Davis, who lived a *little below* the warehouse, died of yellow fever; and on the 31st, Mr. James Craft, who lived *in* the warehouse above mentioned, also died of the same disease. Between the death of Mr. Orr and Mr. Craft, Messrs. Gourd, Gerard, Nichols, Nafe, Bigger, and Blank, all of whom either lived, or had been daily in, the immediate vicinity of the warehouse, sickened, fled from the place and *all died* of malignant fever before the 5th of September. Two died in Coonville, between Natchez and Washington, one at Kingston,

one at Fort Adams, and one at Washington. The inhabitants of all these places, Washington excepted, remained free from disease throughout the season. Mr. William M'Connel was at the warehouse on the 26th August. He sickened on the 28th, and black vomit occurred on the 31st. Dr. Gustine informed me, that he lived six days after the occurrence of black vomit, in the midst of a large family on Main street, in Natchez 'On the Hill,' none of whom took the disease. The two Mr. Wallaces, and a great many others who lived in the vicinity of the warehouse, sickened and were brought into Natchez 'On the Hill,' and died of malignant fever. About the 3d of September, the warehouse was cleansed of its impurities and sprinkled with lime; but this *ex post facto* precaution appeared to have no effect in arresting the progress of the disease. The inhabitants soon found, that a removal from the infected district was the only thing which promised safety, and a great majority of them removed accordingly. The greater part of the sick were likewise removed in Natchez 'On the Hill,' and in various places in the country. The disease continued to prevail among the remaining inhabitants throughout September and October.

Natchez 'On the Hill,' during August and September, notwithstanding the introduction of yellow fever patients from 'Under the Hill,' continued remarkably healthy. Excepting those from 'Under the Hill,' and seven or eight who took their diseases in Washington, and the surrounding country, only thirty deaths occurred in Natchez proper, in August and September. There are scarcely any two months, at the same season, in any year since it received its charter, that the number of deaths in Natchez proper, have been so few. Of these eighteen were of bilious fever, two of intemperance, two of diarrhœa, two accidental, one in child-bed, one of hepatitis, one of phrenitis, and one of croup.

Leaving Natchez for the present, I proceed to Washington, to give a brief sketch of its topography, and an account of the epidemic yellow fever which prevailed there in the autumn of 1825.

Washington, a small village containing about four hundred inhabitants, is situated six miles east of Natchez, and not less than the same distance from the nearest point of the Mississippi river. The town occupies a high and hilly situation, remote from any *swampy ground*, or from any *watercourse* whatever, except a small stream of running water, a branch of the St. Catharine's, about a quarter of a mile

north-east of it. The main street crosses, about the middle of the town, the head of a hollow space or flat piece of ground, about fifty yards wide. This hollow space, being surrounded by hills or high land on every other side except the north-eastern, takes a course in that direction, crossing diagonally the back lots of two squares on Main street, until it approximates to the next principal street at right angles with Main street, and is here contracted into a bayou, which empties into the above mentioned branch of St. Catharine Creek. Washington has always been considered as one of the most healthy towns in the state, in consequence of which, Jefferson College, and Elizabeth Female Academy, the only public seminaries in the state, have here been located. The citizens of Natchez, prior to 1825, always found Washington to be a place to which they could retreat with safety, from the ravages of malignant fever. The inhabitants of that town had hitherto opened their doors to the sick and the dying, and received no harm, as *not a case* of yellow fever ever occurred among those who had not breathed the Natchez atmosphere. When the yellow fever commenced in Natchez 'Under the Hill,' more than one hundred persons from Natchez 'On the Hill,' and several from 'Under the Hill' fled to Washington. I know of but one person who died in Washington with the Natchez yellow fever; this person died at Mr. Fretwells, who had about twenty persons in family, not one of whom was among the first the yellow fever attacked.

A grocer, who had been living 'Under the Hill,' removed his grocery store to Washington in the latter part of summer. He rented an old wooden house on the north side of Main street, which, with the lot attached to it, is situated in the hollow space of ground described above. The earth had been thrown up around the pailings of the lot, except at one place, to serve as a drain in rainy weather. This drain was choked up with weeds and trash when I examined it, during the progress of the epidemic about to be described, and served, but imperfectly, the purpose for which it was intended. The grocer, who removed his store to the house on this lot, removed also a quantity of bacon and mackerel, a great part of which had begun to putrefy at the time of its removal, or putrefied soon afterwards. These provisions the grocer was in the habit of selling to negroes. Mr. Alfred Radcliff informed me, that a few days before the yellow fever originated in Washington, he called on the grocer, in order to purchase some bacon, for a friend in the country,

but on examining it carefully, the *whole quantity* which the grocer had on hand, was found to be in a putrescent state, and none of it fit to purchase. About 2000lbs. of bacon, he stated, was filled with large worms, and was in a putrid condition. About this time Mr. Salmon informed Mr. Cobler, the town constable, that there was a large quantity of putrid bacon contained in the grocery. When Mr. Cobler came to examine the bacon, none could be found. That there had been bacon in the store, neither the grocer nor any other person has pretended to deny. Mr. Cobler told me, that he had no doubt, but that the grocer had the putrid bacon removed the preceding night, to prevent being fined. Mr. Cobler, however, informed me that he found two or three barrels of salted mackerel, in so putrid a condition, that, "on taking up one of these fish by the tail, it fell to pieces."

The Rev. Mr Burruss informed me, that in addition to the putridity within the house, the grocer was in the habit of receiving from the fishermen on the Mississippi river, supplies of fresh cat-fish, (a fish in this river weighing from 10 to 100lbs.,) the heads and entrails of which, besides what rotted on his hands, were thrown into the back yard of the lot above described. All I personally know with respect to the real situation of the grocery, is what every person knows, who either lived near, or came in its vicinity, that the stench from it was extremely disagreeable. Mr. Fretwell and several other persons informed me, that in consequence of the great stench of the grocery, they not only always preferred to do without such articles as they might want from the grocery, to going for them, but also preferred crossing the street to get as far from the grocery as they could, when their business called them by it. They further stated that the house was almost constantly surrounded with swarms of green flies. Captain Whitehurst, who kept a boarding house full sixty yards from the grocery, stated to me, that the stench from the grocery at that distance was extremely disagreeable, both to his family and his boarders. The principal stores and boarding houses in town, were situated a short distance from the grocery, both above and below it. Both the town markets were within twenty-five steps of it. Should it then be a matter of wonder, if a few persons living in the suburbs of Washington, in the most healthy situations, should have been attacked with yellow fever, a little *after* the time it broke out *around* the grocery, when it is recollected that those who visited the stores, the taverns, and the

markets, were exposed to the same atmosphere with those residing in the vicinity of the grocery.

The medium heat of the month ending on the 15th of September, (the day the yellow fever appeared in Washington,) at 4 o'clock P.M., was 86° of Fahrenheit. Between the 28th of August and the 4th of September, the medium heat at the same time of day, was upwards of 91°. Three rainy days immediately preceded, and four rainy days in succession immediately succeeded this warm weather; after this, the weather continued clear and warm, until near the appearance of the epidemic. The atmosphere during the summer and autumnal months, had undergone a very perceptible change. It was much damper than would be inferred from merely looking at the meteorological table. The shoe merchant, as in 1823, found his stock of shoes and boots to become mouldy. He removed from Natchez to Washington, and settled near the grocery, but becoming alarmed, he fled to the country; but it was too late, he was attacked by the disease, which soon proved fatal. Although the medium heat at 5 o'clock A.M., the coldest part of the twenty-four hours, was not less than 76° in August, and 71° in September, yet the night air was extremely raw and chilly, more especially when the wind blew from the north. Bad colds, or a kind of influenza universally prevailed throughout town and country. On the 15th of September, Squire Lemon's son was attacked with yellow fever, and a few days afterwards, the squire and his lady. The latter only recovered. Squire Lemon lived on the side of the street opposite to the grocery. Those who believed the disease to have been contagious, were unable to trace this, the *first case* which occurred among the *inhabitants of Washington*, to any contagious source. On the same day, Mr. Briggs, who removed from Natchez 'On the Hill' in the summer, and who had not been within the infected district of Natchez, took yellow fever. Mr. Briggs, at the time of his attack, was boarding at Wailes,' next door to the grocery, except two small intervening houses unoccupied. A few days before the 15th, Dr. Foster, lately from Natchez, but who had, for the week past, been frequently through Washington, both by day and by night, and in the immediate vicinity of the grocery, was attacked with a disease which ultimately proved to be yellow fever. He died on the 18th, near the college, in the suburbs of town. He was a man of lively sensibility, and irritable system, was lately from the north, and had not been acclimated. He had not been within the infected district of

Natchez. On the 16th, Messrs. Moore and Lee, two carpenters of Washington, who were employed in fitting up some store-rooms at Captain Collins', six or seven doors from the grocery, were attacked with yellow fever. The former died. Their disease was said to have been produced by their having been exposed to some goods from Natchez 'On the Hill,' lying in the rooms they were repairing. On the same day a negro man, living next door to the grocery, who had not been exposed to Natchez goods, took the yellow fever and died in a short time. About this time Mr. Alfred Ratcliff, before mentioned, who had gone a few days previously to the grocery, with a view of purchasing bacon, took the yellow fever, and came near dying with it. Mrs. Norrell, who lived two squares from the grocery, but who, as I was informed by several persons, had frequently been in its immediate vicinity, also sickened about this time, and died the 22d, with black vomit. I saw her in consultation a few hours before death. On the 18th, Mr. Flagg, living at Squire Lemon's, opposite to the grocery, and Mr. White, living at Mr. Woods, one or two doors from Squire Lemon's, were both attacked. Mr. White was my patient. It took twenty grains of tartar emetic to puke him; which, with a blood-letting and two or three cathartics, cured him. On the same day, Dr. Monett, whose office and boarding house were but two doors from the grocery, was attacked with malignant fever. Dr. Johnson and myself attended him. Fortunately for society, this gentleman, as well as Drs. Johnson and Branch, who lived in the vicinity of the grocery, and who were attacked with the prevailing disease a few days afterwards, recovered from it. Dr. Ferguson, however, who lived but a short distance from the grocery, was soon cut off in the bloom of life. By his death many lost a friend, and society a valuable physician. Between the 18th and 25th of September, the disease sprung up in various parts of the town and its suburbs. Within this time no less than ten persons were attacked at Captain Whitehurst's, whose house, as before stated, was rendered disagreeable by the fetid odour of the grocery. It would not only be tedious, but unnecessary, to mention all the persons living in the vicinity of the grocery, that were attacked by the disease, between the time of its first appearance in Squire Lemon's family and Dr. Foster, and the 25th of the month. The 25th was two or three days after the inhabitants had become generally alarmed, and a great majority of them had fled to the country, and *to Natchez 'On the Hill,' which still continued remarkably*

healthy. But as the disease, by the 25th, or shortly afterwards, had appeared in several families residing in the suburbs of Washington, from three hundred yards, to half a mile from the grocery, believing that the cause of science and humanity, demanded it, I made particular inquiry into the history of every case of the disease, which did not occur within the immediate vicinity of the grocery. The result of this investigation, I now proceed to lay before the public.

Four out of a family living in the suburbs, by the name of Patrick, were attacked with malignant fever about the 20th, and all died before the 28th. On inquiring into the history of these patients, I was informed by several persons, who were eye witnesses to the fact, that they had been daily in town, and there exposed to goods from Natchez. To have been exposed to these goods, they must have been in the vicinity of the grocery, where the goods were; for I know of no store, which was removed from Natchez to Washington, that was not within two hundred and fifty yards of the grocery, which, with the exception of some few others containing sound provisions, was the only store which came from 'Under the Hill,' the only part of Natchez at that time infected with yellow fever.

Four ladies who resided out of the neighbourhood of the grocery, Mrs. Snodgrass, Mrs. Carruthers, Mrs. Olds, and Mrs. Whitney, sickened between the 18th and 23d, and all died but one. These cases were brought forward by many persons, as undeniable proofs of the contagious nature of yellow fever. It was proved, that the ladies, a short time before their attack, had several times been shopping in town, examining the new goods from Natchez, and had purchased some woollen goods, which had just arrived from Mr. Kyle's store in Natchez. The handling and the making up of these goods, was confidently asserted as having infected them with yellow fever. Governor Holmes, who resided at that time at Mr. Snodgrass', in the suburbs, and had not been exposed to any such supposed source of contagion, but who had *daily been in town,* was also attacked about the same time the above mentioned ladies were. I made particular inquiry respecting the goods sent by Mr. Kyle from Natchez, which were said to have infected the ladies. Mr. Kyle had just received these goods from New York. As the country people were fearful of coming into Natchez to deal, as soon as the goods arrived, Mr. Kyle sent them directly on to Washington, *before they were unpacked.* The truth is, the goods had not been unpacked from the time of their

leaving Manchester in England, until they arrived in Washton. How far the goods from Natchez, and how far the above mentioned grocery, had an *agency* in producing the yellow fever in Washington, I shall leave for those to determine, who are governed more by facts than their own imaginations, in the formation of their opinions. Mr Ino. T. Grayson, who lived two miles in the country, but who had frequently been in town, and Colonel Wailes, in the country, who was in the habit of visiting his relation, two doors from the grocery, were also attacked about this time. The former died. Two out of three of Mrs. Giles's family, who fled about the time the first cases occurred, from their residence on the *same* square with the grocery, (the squares in Washington are three hundred feet long,) were attacked a few days after their arrival in the country. Before the 25th, seven of Colonel Marschalk's, and the same number of Dr. Wren's family, besides Mrs. Moss and Mrs. Ino. Wren, all living a little without the neighbourhood of the grocery, were attacked with yellow fever. I attended on all these persons. On making an inquiry of them after their recovery, I found that they had all been in the immediate vicinity of the grocery, some of them daily.

If there be any more persons who were attacked before the 25th, that resided beyond three hundred yards from the grocery, I have not been able, on particular inquiry, to ascertain the fact. But I have been enabled to ascertain, that of all the persons who continued to reside within this distance of the grocery, very few had escaped an attack by the 25th. Of those who remained within these limits during the epidemic, but two individuals entirely escaped. Although the grocer was in the habit of taking pills of scammony, aloes, and calomel, and of giving them to his family, yet none of them escaped disease. To account for this precaution, I have only to add, that he was a contagionist, and these pills had been recommended to him as an antidote for the contagion of yellow fever.

The grocery store was removed back to Natchez, late in September, but the house long retained a fetid odour. The inhabitants began to return to Washington after the occurrence of two or three light frosts, but several were attacked and died; among the latter was Dr. Banister. Mrs. Hewitt, who was among those that returned, settled opposite to the grocery in Squire Lemon's house; she soon afterwards lost two of her children with yellow fever. The disease, however, ceased entirely in November, after several severe frosts.

The number of deaths from the yellow fever of Washington, was about equal to one-third of the whole number of those who remained in town; and more than equal to one-eighth of the whole population, including those who fled, strangers as well as citizens. I know of one person who was attacked in the country, so late as the 8th or 9th day after he had left town. Fatigue and exposure to the sun, the day before the attack, appeared to have been the exciting causes. Black vomit occurred on the second, and death on the fourth day from the first attack. Not one out of eight of those who were treated on the emetic plan, died of the Washington yellow fever. Many of these patients were attended to under great disadvantages. The yellow fever of Washington, like that of Natchez, in 1823, had three stages. The first stage, was generally preceded by, and attended with, catarrhal symptoms. It was known by the patient's sensations being no true evidence of the actual coldness or heat of his surface; by the heat of the surface being unequally diffused, the head and breast hot, the extremities often cold; by the patient preferring to be wrapped up in blankets, although at the time, his skin may have been pungently hot to the touch; by the chilly feeling being greatly increased, if the patient merely reached out his arm to have his pulse felt, or if any of the bedclothes were removed, although he might have complained of these making him disagreeably hot, by a copious perspiration occasionally taking place, and drying up without relieving the disagreeable chilly feeling, abating the pungent heat of the skin, equalizing its evolution, or establishing the lost relation between the patient's feeling of heat, and the real heat of his body. So different were the sensibilities, both organic, and animal, in this fever, from a healthy condition of the system, that I have known patients to complain of their extremities being cold as ice, when they were actually burning hot. I was forcibly impressed with this fact, on seeing patients bear to their extremities, particularly their feet, applications sufficiently hot to corrode or blister the skin, and produce great pain, were not the organic and animal sensibility of the part very different from health. I recollect of having affronted one person, from having him put in a tub of water, disagreeably hot to my hands, not because he found it too hot, but too cold. The most prominent features, however, of this stage of the disease, was an ataxic reaction or irregular energy of the arterial system, accompanied with an increased determination of blood to the head, a flushed countenance, red gleaming eye, and strong pulsation in the

carotid, but not in the radial arteries. The breathing was often laborious, and frequently interrupted with yawning and sighing. The stomach was flatulent, and the patient complained of great soreness in his muscles and joints, and of more or less pain in his head and back, which increased greatly as the disease approximated to the second stage. Frequent vomitings of a vitiated fluid, at first mixed with bile, but afterwards containing no bilious matter, generally terminated this stage. The second stage was known by the patient losing all his chilly feelings; by his throwing off the bedclothes, calling for cold drinks, being tortured with the severest pain in his head and back, tossing himself from side to side in his bed, or going from one bed to another; by his uniformly hot surface, by a diminution in the secretory processes; to wit, a paucity of bile and urine, great dryness and heat of the skin, and mucous membranes, and lastly, by an increased energy of the whole arterial system. The third stage was pointed out, by the heat of the surface having diminished, but not the patient's sensation of heat having *proportionally* diminished, by a slow irregular respiration, or even when the number of respirations, differed but little from the healthy state, by the chest rising and falling by steps, as if the lungs had to make two or more efforts to *draw in* the air, and two or more to *expel* it again; by the expiration being often cut short, or interrupted, in consequence of a sudden inspiration taking place, at any one of these steps, before a natural collapse of the lungs had taken place, and *vice versa* by the slowness of the pulse, the wildness of the look, the alienation of the mind, the confidence of a speedy recovery; by the yellow skin, accession of strength, the black vomit, and hemorrhages from the mouth and nose.

The first stage, in some cases, quickly passed into the second, in others, it continued twenty-four, or even forty-eight hours, before the reacting stage ensued. This stage, in some, never occurred, the disease passing at once from the first to the last stage. while in others badly managed, it lost many of its characteristic features; viz., there would be great heat, thirst and pain, yet a quick irritable pulse, which would not bear the lancet; a comatose state of the brain, similar to typhous fever, accompanied with extreme irritability of the stomach, and a strong disposition in the bowels to take on a watery purging. Such cases were very fatal. The disease, not only in Washington, but in Natchez, the present season, differed from that of the latter place in 1823, in its very great liability, in many cases, to be attended with copious and

vitiated secretions, not only in its first but in all its stages. Under the copious and depraved evacuations, from the stomach or the bowels, excited by small nauseating doses of tartar emetic, a little antimonial powder, an emetic or any cathartic improperly timed and regulated, the system became robbed of its energies, and instead of a free and open excitement, or a soft state of the skin and pulse, the pulse would become smaller and quicker, coldness would take place, first in the toes and fingers, and spread gradually over the extremities, rendering them insensible to blisters or sinapisms, comatose symptoms, with an increase of the irritability of the stomach would supervene, attended with delirium, the patient would refuse all medicines, and vomit every thing which was forced upon him. The disease, more or less, assumed this highly dangerous character, in proportion as the evacuations from the alimentary canal, had been more or less copious, or more or less vitiated. A constant vomiting of phlegm, or a limpid fluid, whether in large or small quantities, served more to distress than to relieve the patient: such vomitings produced no good effect either on the skin or pulse. When the alvine evacuations were of a limpid or dark watery character, they were generally copious, and sooner exhausted the patient, than when they consisted of phlegm or a gelatinous substance. The latter were less copious than the former. Stools consisting of a thick white gelly, resembling coagulable lymph, in quantities from two to six ounces, sometimes were discharged. These, however, did not much exhaust the patient, and were rather favourable than otherwise, as they frequently preceded the evacuation of *thick dark bilious* stools, which always relieved the symptoms, and strengthened the patient. But such should not be confounded with the *dark watery* evacuations, which have the opposite effect on the system. In the fever, both of Washington and Natchez, it was no unusual thing for persons when first attacked, before medical advice was obtained, to take some simple medicine, calculated as they thought, "if it did no good, to do no harm." Lee's pills, calomel, salts, small exciting doses of tartar emetic, &c., were generally the medicines used; which, not being calculated to produce the *proper kind* of secretions, irritated the system, already ripe for it, into deranged organic actions, attended with copious and depraved secretion, which soon prostrated the system. It was no unusual thing for a dose of salts to produce ten or a dozen, copious watery evacuations, or for a grain or two of tartar emetic, or a dose of ipecacuan, to

excite a constant and distressing vomiting, *unattended* with bilious secretion. In 1823, secretion of *any kind* was difficult, in the early stages of the disease, to be produced; in 1825, it was equally difficult to produce *bilious* secretion, while watery, or vitiated secretions, were too *readily* excited. To guard against the latter, and to effect the former, constituted the principal difficulty in the treatment of the yellow fever of 1825, which I now proceed briefly to notice.

Treatment.—As in 1823, during the first stage, or that of ataxic reaction, tartar emetic was found to be the most useful remedy. I generally gave from six to ten grains at a dose, and repeated it in smaller doses, until it either produced bilious emesis, removed the chilly feelings, developed an excitement throughout the system, produced secretion in the skin or kidneys, subdued the ataxic fever, or palsied the deranged organic actions. Vitiated secretions seemed to depend on the *latter*, as, in many cases, the first doses of tartar emetic *put a stop* to the vomiting of a vitiated fluid, which had taken place *before* its exhibition. Tartar emetic, however, used in small and repeated doses, often rendered the stomach more irritable, and even when used in effectual doses, it often did harm, unless properly managed. When the chilly sensation was very great, the warm or hot bath, if used a little before, or at the time, the emetic was given, enabled it to produce bilious secretion much more readily, and with much less distress to the patient, than when the emetic had been trusted to alone.

Vitiated secretions, and other bad effects, were often thus prevented from taking place, by acting on the deranged organic sensibility of the system, *without*, by the warm bath; *within*, by tartar emetic. A warm diaphoretic, as snake root, by being given in conjunction with the tartar emetic, in cold and torpid states of the system, was found of great benefit in enabling it to bring about the proper kind of secretions, to guard against those of a vitiated character, to arouse the stomach from its torpor, and to prevent the remedy from having any bad effects on the system.

Case.—Mr. K. of Natchez, was violently attacked. He told me to give him any thing but tartar emetic, for it always cramped him, produced great coldness, and he had, every time he had taken it, came near losing his life. His life appeared to me to depend on a bold use of the remedy he so much dreaded, as I had no hope of subduing so violent an attack, unless some great change could be produced in his system by the remedy in question. As his kidneys

were torpid, I gave him freely of gin sling, had him put into a hot bath, to remove the chilly sensation he complained of, and gave him, while in the bath, ten grains tartar emetic in half a pint of strong seneka tea. He puked *bile* copiously and easily; and so far from requiring hartshorn, laudanum, &c., to remove the coldness and cramp, as formerly, he soon lost near two pounds of blood, to subdue the consequent arterial reaction. He soon recovered. From Dr. M'Pheeters I learned the efficacy of black mustard in vinegar, both as an emetic itself, and as a powerful co-adjutor of tartar emetic, in cases wherein the latter alone, from torpor of the stomach or some other cause, failed to awaken the energies of the system. Warm brandy toddy, in some cases, prevented the tartar emetic from producing vitiated secretions, and at the same time enabled it to produce those of a proper kind, or at least enabled it to *prepare* the system for *their production.* As cold feet and hands had a great effect in opposing the beneficial action of tartar emetic, warm pediluvia sinapisms, frictions, &c. were found to be necessary to place the system in a proper condition for *its reception.* It was always necessary to subdue by the lancet, general arterial reaction, or fever, whenever it came on, as it sometimes did, before bilious vomiting had been produced. If it were a broken reaction or fever, however, tartar emetic was its best febrifuge. Great determination of blood to the head, in the ataxic stage, with a pulse at the wrist, which will not indicate blood-letting, while at the same time there is a very strong pulsation of the carotid arteries, so far from being a state of the system that contraindicates tartar emetic, is the very state of the system in which I have witnessed more beneficial effects from the remedy in question, than any other whatever. I am not the only one who can bear testimony of the beneficial effects of tartar emetic in such states of the system. Dr. M'Pheeters has kept a record of a great number of cases of this kind, wherein emetics were found to be no less useful, than the bark in intermittent fevers. If the pulse at the wrist, and other circumstances, do not forbid blood-letting, this of course should be premised, previously to the exhibition of the emetic, but when this is not the case, the blood-letting should be deferred until after the remedy has produced a change on the deranged organic sensibility of the system, broke up the irregular determinations of blood, and brought out a general reaction of the arterial system.

The worst consequences sometimes occur from a *timid* use of tartar emetic, from giving it in too small doses, repeated

at too long intervals, or from discontinuing its use on the first appearance of any unpleasant symptom, at a time when it may be most needed.

CASE.—Col Marschalk, a very large, corpulent man, was attacked with the yellow fever of Washington. I gave him an emetic in the ataxic stage of his fever. In a few hours afterwards I was called in great haste to see him. He was panting for breath, as if in a fit of asthma. No *bilious* vomiting had yet been produced. Great heat, pain, and inward distress, were complained of. I bled him about a pt. as his pulse would bear no more, and gave him 3 grs. of tartar emetic every half hour in sp. æth. nitr. The second or third dose brought on effectual vomiting, attended with no distress, the skin became moist, the difficulty of breathing, internal heat, pain and distress, were removed, and the patient recovered without further difficulty.

Another CASE, wherein *one dose* of tartar emetic was not sufficient to produce a proper change on the deranged organic sensibility of the system, and seemed to increase, rather than allay its morbid commotions. Dr M'Pheeters gave one of his patients in Natchez an emetic and requested me to see the patient in his absence. I saw him four or five hours afterwards. His emetic had not operated effectually, his pulse would not bear blood-letting, there was great determination of blood to the head, his skin was dry, and only hot about the head, breast, and abdomen. I repeated the dose of tartar emetic. Copious bilious secretion was produced, the arterial energies became equalized, a slight general reaction ensued, the patient drank some gruel, and had several copious bilious stools. The skin became moist, and the fever disappeared. The Doctor wished to know of me what I had done to the patient to cure him so quickly, observing at the same time that it was one of the most violent attacks he had witnessed the present season. I had only to inform him that I had repeated the dose of tartar emetic, and had made the patient warm his feet and hands by the fire, and had done nothing else. But it behoves me to state, that the *worst effects* are sometimes produced by tartar emetic rashly persisted in, without regard to the condition of the patient, in order to bring about some *particular effect* on the system, as, for instance, *bilious* vomiting. But who has not witnessed the worst effects from cathartics, or from mercury, rashly persisted in, without regard to the condition of the patient, in order to bring about some *particular effect* on the system, as for instance, *dark bilious* stools, or a discharge of *saliva?* The

practitioner who expects in all states of the system, in the same stage of disease, to bring about bilious vomiting, nay, even any vomiting at all, will sometimes be disappointed. To persist in the use of the remedy, in the vain attempt to produce such an effect, would often prove fatal to the patient—while, if governed by other effects of the remedy, than those of bilious vomiting, he would know how long to continue, and when to discontinue its use, so as to be enabled to benefit, and not to injure the patient—to benefit him, when no other known article of the Materia Medica would do it For a part or the whole, of the sequence of events, which sometimes succeed the use of tartar emetic in some morbid states of the system, will be very different in other morbid states, and hence bilious vomiting, which is only *one event* in certain sequences of events of some morbid conditions of the system, will not always succeed its use. As I intend to touch again on this remedy in the present, and also to dilate fully on it, in a subsequent Essay on Bilious Pneumony, I will not anticipate what I have there to say; I would, however, observe, that with an experimental knowledge of the states of the system to which it is adapted, it is to the physician, what the knife is to the surgeon, experimentally acquainted with the structure of the human system—it may be used boldly and freely, when occasion requires—but without this knowledge, it *may* inflict a fatal injury.

By an emetic properly managed, if given early in the disease, not only the fever of Washington, but that of Natchez, was often cut short at once, and the patient recovered without further trouble, while the mildest attacks, if left to nature, ultimately seldom failed to prove fatal. If the disease did not yield at once to emetics, general arterial reaction ensued in the most of cases, requiring the lancet for its reduction, together with purgative medicines, which brought on bilious evacuations, that soon relieved the patient. Sometimes, however, when emetics had not been used at a period of the disease sufficiently early, or if used, had not been properly managed, or if properly managed, owing to some peculiarity of the case, had not produced their general beneficial effects on the system; but most generally, when emetics had been entirely omitted, it was difficult to produce by purgatives, the *proper kind* of evacuations from the bowels—I mean evacuations of a dark bilious matter of tolerable consistency. In such cases it was very difficult to retain purgative medicines on the stomach, owing to its irritability, and, if retained, even calomel would often produce watery evacuations. In such cases, to continue the use of this or any other purgative reme-

dy, without first *altering* that condition of the system on which the watery evacuations depended, was to continue to use them to the destruction of the patient. In as much as he became speedily exhausted under such evacuations, I made it a rule to check them by an enema, of a teaspoon-ful of laudanum in a little starch gruel, or by giving opium or its tincture. The next object was to *alter* that morbid condition of the system on which the watery or vitiated secretions depended. Tartar emetic, either with or without the addition of a little opium, in two or three grain doses, every one, two, or three hours; calomel, with two or three grains of opium, or with ten or twenty grains of camphor, repeated according to circumstances, and assisted by the warm bath, blistering, &c. were often found useful in *preparing* the system to be properly acted on by purgatives. A remedy, however, which appeared to suit some cases the best, was the sulphate of quinine, or, where the stomach would bear it, the Peruvian bark with cremor tartar and cloves, either of which was given without regard *to fever*, if such fever would not admit of blood-letting. Even when the fever (I mean heat of skin, &c.) was increased under this practice, the various organs of the system became more disposed to take on a proper secretory action, than before such fever had been excited. I am confident that I used the sulphate of quinine in too small doses in our late epidemic. Dr. Perrine assured me, that in the bilious fever in the country, ten or fifteen miles from Natchez—to prevent a watery purging, which so often took place in that disease, he resorted, after having premised sufficient blood-letting, to the use of the sulphate of quinine in eight grain doses, every two hours through the day, *notwithstanding the presence of fever*, and at night gave aloes, scammony and calomel in pills, still continuing the sulphate. He assured me that under this free use of the sulphate, the fever would abate, and the cathartic would produce thick, copious evacuations of a dark colour, which would soon relieve the patient; whereas, to use the purgatives without the sulphate of quinine, if they operated at all, they only produced *watery stools*, which soon robbed the patient of his strength, and aggravated his disease. Dr. M'Pheeters and myself have both used, with a similar intention, the sulphate of quinine, after the plan of that excellent physician, Dr. Perrine, and we have found it even to surpass our expectations. The purgatives which could be the most relied on, in the epidemic of 1825, to produce bilious secretions, were calomel, aloes, and scammony, combined, the purified spirits of turpentine, and the croton

oil. When there was much pain in the bowels, accompanied with tenesmus, the charcoal, as recommended by Dr. R. Jackson, was of great service. The best plan of giving medicines in cases of great irritability of the stomach, which neither sulphuric ether, opium, effervescing mixtures, &c. will allay, has heretofore been with me a desideratum in practice. The fate of a patient frequently depends on minutiæ, too often unattended to in practice. It is an easy matter to prescribe aloes, scammony, jalap, &c. in order to purge a patient, who is constantly sick at his stomach. But the object of the prescription is often entirely defeated, in consequence of the patient refusing to take these remedies; or if he takes them, by the impossibility of his being able to retain them on his stomach. The best plan I ever tried, of giving these, and similar nauseous medicines, so as to obviate the inconvenience of their disagreeable taste, and to prevent them from being vomited, is to have the various purgative articles made into a soft mass with syrup. Any given quantity of this mass, is to be enclosed in a very thin wafer, made of flour, and softened by being soaked a few minutes in water or milk. The enclosed mass is then put into a spoon with a little water in it, out of which the patient is to swallow it. After this manner, a patient can take *at one dose, a mass sufficient to make a dozen pills*, and he cannot without the strongest efforts, throw it up from his stomach; he tastes nothing but the flour wafer, and the nausea of his stomach is not increased, as it would be from his swallowing a quantity of bitter pills. In this way, a large quantity of Peruvian bark may be given at a dose, without the patient's tasting it. One tablespoon-ful of flour, made into a *batter* with water, is sufficient to make sixty wafers. The plan of making them is, to have two smoothing irons heated, one of which is to be placed with its face upwards, on which a few drops of the batter is to be poured, and the other iron is then to be pressed upon it. The little cake, or wafer, thus made, is, as I before observed, to be soaked in water before using it, in order to make it sufficiently pliant to enclose the medicine. I venture to assert, that whoever tries this plan of giving nauseous drugs, as aloes, &c., in cases of great irritability of the stomach, will seldom prescribe them in pills, syrup, or solution. Calomel, however, can be very conveniently given, floating on a tablespoon-ful of common cold water. A tablespoon-ful of water will float two scruples, if the calomel be not in lumps, and if it be sifted down lightly on the water. Spirits of turpentine should be purified by mixing it with alcohol,

as directed by Dr. Nemmo.* With these remarks on the manner of administering remedies in cases of great irritability of the stomach; remarks, though seemingly of little importance every where else, may not be entirely so at the bed-side of the sick, I close what I have to say on the Washington yellow fever, the history of which disease, if it does nothing else, will show that an epidemic yellow fever is not necessarily confined to *water courses*.

I now proceed to give an account of some cases of malignant fever which originated at Haughton's tavern, in the country, about a mile from Natchez. Nine or ten persons died in and about this place with yellow fever. I was called to one of these persons, a Mr. Cope, in the last stage of his disease. It was a well marked case of yellow fever. He had the red gleaming eye, the dark yellow skin, and the black vomit. He assured me on his death bed, that he had not been in Natchez or Washington, for three months. His acquaintances gave their testimony in support of his statement. He died on the fourth day of his disease. Mr. Saunders, who had not been in Washington or Natchez, during, nor for some time before, the yellow fever appeared, stopped a few days at Haughton's tavern, with Mr. Cope. A short time afterwards he was attacked with yellow fever. I had attended on this gentleman about two months before, in an attack of bilious fever, from which he had entirely recovered. As soon as he was attacked with yellow fever, I was called to see him. I found him in the first, or ataxic stage of his disease, the pulse at the wrists feeble, that of the carotids strong, his eyes of a gleaming red. He complained of some pain in the back and head, and of a chilly feeling when the blankets were removed from him. I gave him ten grains of tartar emetic at a dose, in snake root tea, and used warm external applications, to assist the tartar emetic in restoring the deranged organic sensibility of the system, that it might produce a proper secretory action. In the course of three hours bilious emesis was effected, the chilly feeling vanished, the disease passed into the second, or reacting stage, and was ultimately cured by purgatives. From some cause, probably from the miasm of yellow fever overwhelming the powers of life to a very great degree in the first instance, the reaction in Mr. Saunders' case was never so great as to demand the lancet. Whenever cathartics began to weaken him, by producing thin watery stools, they were discontinued, and the

* See New England Journal, vol. XI. p. 321.

watery evacuations put a stop to. The bark and snake root were used in the place of the cathartics, to prepare the system for the latter, and to keep up some little reaction, which, in causes of this kind, is a staff to the tottering powers of life. Of all those who were attacked with the yellow fever at Haughton's, Mr. Saunders, with one exception, as far as my information goes, was the only person who recovered. The disease commenced at Haughton's, in September, a little prior to its appearance in Natchez 'On the Hill.' If medical topography throws light on the origin of yellow fever in other places, it does not withhold its light in the present instance. Haughton's tavern, and Shears's, (the two houses where all the cases referred to originated,) are situated without the chartered limits of the city, on a small peninsula formed by the junction of two very long, deep, and winding bayous. One of the bayous commences on the eastern, the other on the western side of Natchez; and, with the exception of two or three squares, *the whole* of Natchez is drained by them. The western bayou, after draining the western part of Natchez, passes by the butcheries, receives their offal, and pursues a serpentine course, to meet its fellow, the eastern bayou, at Haughton's.

Just before the two bayous reach Haughton's and Shears's, they approximate within about thirty rods of each other, and then, before they meet, they form a zigzag semicircle, within which, Haughton's tavern, his out houses, and Shears's, are included. The common bayou, formed by the union of the two bayous, runs into the St. Catharine. A little before this union is formed, a third bayou from the south, puts into the western bayou, and forms a large chasm, more than fifty yards wide, and from thirty to sixty feet deep. Haughton's houses are not more than one hundred yards from the brink of this chasm, which contains in its bottom, the putrid sediment mixed with the corrupted water from the western half of Natchez, and from the butcheries. Between the eastern bayou and the foot of the little hill on which the houses alluded to stand, there is a flat surface of about an acre, *surrounded on all sides by hills.* A gully, leading through the isthmus formed by the two bayous, conducts the water of an adjacent field on this flat surface, over which it spreads, before it falls into the bayou. Haughton's tavern is within ten steps of this flat gound, which, besides what the gully brings on it, and besides its own vegetable productions, is the receptacle of the kitchen offal, and of a privy which has no well. Where the eastern and western bayous meet, a

distance from the tavern of about thirty rods, there is also a flat surface surrounded by hills. The eastern and western bayous, in their whole course from Natchez, are seldom less than ten feet wide, and ten feet deep. In many places they are more than fifty yards wide, and as many feet deep. Their banks, which are steep and abrupt, are almost constantly falling in, which obstructs the current of water from a light rain, but affords no obstructions to the torrents which roll down them during heavy rains. In 1823 the yellow fever prevailed at this place. But I then supposed that the polluted atmosphere of the city had extended thus far. I was inclined to this opinion, as several persons, whom I attended, assured me that they had not been in town. I did not, at that time, suspect the bayous of having any agency in the production of yellow fever, but I have since that time, in my practice through various parts of the adjacent country, which abounds with these bayous, found the remark verified, of an old practitioner of this place, the late Dr. Seip, that "a bayou was more sickly than a marsh." I deem it necessary to state, that Mr. Haughton does not believe the yellow fever originated at his house, as some of the persons who died there, had been in town. Some, however, of his own family, who were *first attacked*, he admits had not been in town. That they died within five or six days, and that out of six who were attacked at his house, five died. Dr. Hunt who saw two of these cases, pronounced them *malignant*. In marching forward with any truths which we may have collected, that hereafter might be found of use in promoting the interest of science and humanity, it behoves us, rather than be stopped in our progress, to tread on our own pecuniary interest as well as that of others. To do otherwise, would be like stopping to save a copper, when we might have saved a life. I again return to Natchez. On the appearance of the yellow fever 'Under the Hill' in August, all the practising physicians of the city, met together and resolved; "that whenever a case of malignant fever originates within the city 'On the Hill;' a meeting of the physicians be called, by the attending physician, for the purpose of giving the citizens information thereof." It was more than a month after the first appearance of the disease 'Under the Hill,' before any case occurred, which originated on the hill. As soon, however, as this happened, the physicians met, and informed the citizens of it.

But in what parts of the city 'On the Hill' did the first cases occur? not in that part of the city adjacent to the bluff,

below which the disease had been raging since some time in August; not in those houses, 'On the Hill,' whose doors had been thrown open to the sick and the dying from 'Under the Hill,' nor among those who humanely nursed them. But, as if to convince the most sceptical of its non-contagious character, the first cases of yellow fever 'On the Hill,' originated in parts of the city the most remote from the district first infected, in houses which had not received any yellow fever patients in them, among those who had not nursed, or even visited any persons with the disease.

About the first of October, the yellow fever broke out in three different places 'On the Hill' in Natchez, viz., in two adjoining squares, No. 22 and 23, (which may be seen by a reference to the drawing, accompanying my former essay,) in the south eastern part of the city; in three adjoining squares, No. 13, 19, and 18, in the northern part; and lastly, in a neighbourhood containing about a dozen houses, some few hundred yards on the road to Washington, and without the *block* of the city. As the disease not only appeared in, but confined itself with few exceptions to those parts, while bilious fever was prevailing in the other parts of the city, by far its greatest proportion, I deem it important to present the medical public with an account of the situation of the infected districts, at, and before the time of the appearance of the malignant fever; well knowing, however, from experience, that he who approaches any man's door or neighbourhood with facts, however undeniable and irresistible, to locate the origin of yellow fever, is generally met by ridicule, and opposed by the prejudices of the ignorant and the mercenary. Before proceeding to a particular description of the infected districts, it will be necessary to premise, that from the time the yellow fever appeared 'Under the Hill,' in August, the measures which had been previously adopted to keep the city clean, such as having all the kitchen slop and various other nuisances carted off from without the city, had been entirely suspended. The aqueducts were permitted to get choked up. The back yards and gutters now became the receptacles of the kitchen slop and offal, until the occurrence of rain washed the most of them into the three infected districts, soon to be described. By a reference to the meteorological table, it will be seen, that for four days ending the 22d of September, the thermometer was as high as 90° and 91°, and that during nearly one-third of October, the mercury stood at 87°, 90°, and 91°. The 6th of September excepted, there was no thunder during the months of Sep-

tember and October. There were only three thunder storms in August, and one in July.

Dr. Tooley, an old resident of this place, and a very accurate meteorological observer, remarked that there was less thunder this year, than he had ever known, not excepting 1823.

In the south-eastern infected district, the two squares alluded to, have been rendered by the recent elevation and extension of Fifth street, from one to ten feet lower than any street which surrounds them. Two small wooden aqueducts, placed under the new street, constitute the only drains of these squares. These aqueducts became choked up in September, with weeds and trash, and served very imperfectly the purpose for which they were intended; for nearly every rain left more or less water on the surface of several lots in the above squares, which sooner or later evaporated amidst the sweepings of kitchens, the rubbish of shops, and the weeds and trash of the back yards. The water, which makes its way through the aqueducts, falls immediately into a bayou of irregular depth, that meanders for some distance along the eastern side of the new street. Mr. Hughes, Mrs. Smith, Mrs. Jones, and a negro of Grudeau's were among the first who died of malignant fever in this district. They died early in October. I proceed now to the northern district. Most of the lots of square No. 18, besides about an acre of ground on square No. 19, are from ten to thirty feet below the surface of the surrounding land. In rainy weather the water from at least fifty acres in the northern suburbs, is poured upon the above mentioned square and the flat land adjoining it. This low ground was formerly drained by a bayou, which has been filled up, and a ditch, more than forty feet deep, has been cut through a hill, in order to drain the water off in another direction. In 1823, the bottom of the ditch being below the surface of the flat ground, it fulfilled its intention very well; but since that time, the banks of the ditch, by falling in, have raised its bottom in some places a little above the surface of the flat ground; the consequence of which is, that although during hard rains, the greater part of the water which flows down on the low lots in this flat surface, forces it way over the impediments in the ditch, yet a considerable quantity has necessarily to remain on the above mentioned low surface, and there evaporate amidst the sediment washed down from the adjoining hills, and the slop and filth from some of the higher lots in town. Mr. Samuel Stewart was the first person who died of malignant

fever in this district. He died on the same day the first death occurred in the other district. Neither Mr. Stewart nor the persons mentioned as having first died in the other district, had been exposed to any real or even imaginary sources of yellow fever, other than those about their own doors. I come now, in the last place, to the houses above mentioned without the block of the city. The inhabitants of these houses suffered severely from yellow fever. A large deep bayou winds along within ten or fifteen steps of the doors of these houses. The road crosses the bayou at the lowermost house. Where the road crosses the bayou at the lower house, instead of a bridge, the bayou is filled up and a wooden aqueduct placed under the road, to permit the water of the bayou to pass through. This aqueduct was *broken in* by the weight of the superincumbent earth, in the summer of the present year, and whenever it rained, the water from more than one hundred acres of the neighbouring hills, and from the eastern part of the town, saturated with various descriptions of filth, was thus stopped in its course, in the months of August, September, October, and November; and what could not break its way over the impediment it met with, was left to evaporate, in a bayou of irregular depth, containing here and there in its bottom, a filthy sediment. Of the whole number of persons (about thirty) who remained in the houses on this bayou, on inquiry, I could not find one that had escaped sickness. Even so late, and between the 1st and 15th of November, after the most of the inhabitants who had fled from Natchez, had returned to their homes, after the disease had ceased to occur in the other infected districts, Mr. Butler, who lived immediately on the bayou, where it crosses the road, returned home likewise. He had not been home but a short time, before nearly all his family took yellow fever, and two of his children died with black vomit, one so late as the 15th of November. Dr. Hunt, who attended them, attributed their disease to the bayou, which, in places, still contained in its deep bottom, a fetid water mixed with filth, exposed to the action of a noon-day sun.

Mr. Frear, who had commenced boarding at Mr. Cotton's, next door to Butler's, was soon taken sick, and died of malignant fever on the 7th of November; reported by Dr. Gustine. None of Mr. Cotton's family escaped sickness. Mrs. Muretto, from the upper country, late in October, stopped a few days at Mr. Fowler's, the upper house on the bayou. On the 5th of November her name was on the sexton's report, died of malignant fever;

attended by Drs Hunt and Chew. Her friends attributed her death to her having slept in the same room in which several had died of malignant fever; this, however, will not account for the cause of those deaths which preceed.

How far a quantity of fetid water mixed with filth, which had remained in the bottom of the bayou all the autumn, immediately before Mr. Fowler's door, assisted in the production of these cases, I shall leave for others to determine. The disease continued nearly two weeks longer in this, than any other infected district. I have thus pointed out the condition of three different places in Natchez, which every person admits to have been by far the most sickly, of any other parts of the city; places to which, after considerable inquiry, I have been enabled to trace nearly all the cases of yellow fever which occurred in Natchez 'On the Hill,' in 1825. Some few cases, however, appeared in low, damp, and dirty houses, not in the limits of the infected districts; and some two or three individuals took yellow fever while living in parts of the town apparently clean. It is more than probable, that such took their disease by being exposed to some one of the infected districts, as these were on the south-eastern, the eastern and northern parts of the city, and through which the principal highways passed. As Dr. Perlee has given an account of the yellow fever of Natchez, in 1819, there being only one more epidemic of this place which the public have not received an account of, I will here add a brief sketch of the epidemic of 1817, which I received from Dr. Samuel Gustine, then practising medicine in Natchez, and who is a man remarkable for his close observation. The doctor stated, that between Fourth and Fifth streets, and south of Main street, there passed a deep bayou; this bayou from South to Main street was filled up, by erecting dams across it, to catch the drift washed down in rainy weather. This consisted in part of the filth from a *candle factory* at the head of the bayou, and the offal of shops and kitchens.

The same year that this bayou was thus filled up, 1817, the yellow fever made its *first* appearance. Immediately around it, seventeen persons out of twenty who were living in two houses directly on the bayou, fell victims to the disease.

The yellow fever 'On the Hill,' in 1825, differed but little from that of Washington. But 'Under the Hill,' it resembled more closely in its symptoms and progress that of 1823. Nearly all the physicians who got much practice, adopted the emetic plan of treating the disease of the present year,

and these seldom lost more than one in ten of their patients; while, under the old plan, of trusting to a few grains of calomel, frequently repeated, with inunction of mercurial ointment, in order to bring on salivation, the disease was about as fatal as formerly. Dr. Hunt, who came to Natchez very much prejudiced, by education, against emetics in yellow fever, but who is too liberal to advocate the errors of theory unsupported by facts, threw aside his prejudices, and not only prescribed emetics with great success to his patients, but when attacked with yellow fever himself, commenced the cure by an active emetic; so did Dr. Walker. Neither of these gentlemen ever had cause to repent of this first, yet all important step in the treatment of their disease.

One of the first patients whom I attended on at the commencement of the yellow fever in Natchez, was a negro woman of Mr. Lyle. She had taken it by going 'Under the Hill.' The attack took place while walking in the street. Her master at first thought she was intoxicated, but the absence of the smell of ardent spirits in her breath or in the matters ejected from the stomach, and the rapid development of febrile symptoms, soon convinced him of his mistake. A small quantity of a vitiated fluid was occasionally vomited. I gave ten grains of tartar emetic, and took away about eighteen ounces of blood; for the determination of blood to the head, owing probably to her having been much exposed to the sun, was very great, and the pulse at the wrist was tolerably strong. In the course of an hour and a half, ten grains more of the tartar emetic were given, as the first had not puked her. Her former vomiting was completely checked by the scruple of tartar which she had taken. In two hours, nine grains more were given. It was not until an hour and a half after this last portion had been taken, that the patient began to vomit. She now, by the assistance of diluents, vomited bile four or five times, and then the vomiting ceased entirely. Her eyes became less red, the violence of the pulsation of the carotid and temporal arteries very much diminished, and an equable, though not violent arterial reaction took place throughout the system. The stomach was now so composed that it retained cal. aloes and seam. Bilious stools succeeded. The next day the cathartic was repeated, but the evacuations became watery. A little laudanum, to check the watery purging, and bark and snake-root to change that condition of the system on which the watery stools depended. On the third day, cathartics resumed—stools bilious at first, but afterwards change to

slime and water. Bark resumed. On the fourth day cathartic; stools bilious; the patient becomes relieved, appetite returns; fifth day all medicine discontinued. I deem it unnecessary to relate any more cases, but as many persons have condemned the use of emetics, and particularly tartar emetic, in yellow fever, not as I believe, because they have found them injurious in practice, but injurious in theory, I will briefly notice some of the objections which have been made against them. Dr. Bancroft condemns emetics; first, because they fail in their principal object of removing nausea, which rarely, he says, depends on a load of undigested food, or bile, or phlegm in the stomach. We who give emetics in yellow fever, have no such object in view; and we acknowledge with that author, that nausea, to which may be added vomiting, depends on other causes than bile, or phlegm or food in the stomach. This argument against emetics being founded on the *assumption*, that the *principal object* of giving them in yellow fever, is to remove nausea, has no foundation but in the imagination of its author. His second objection, that vomiting exhausts the strength, and propels a large quantity of blood into the head, must be an objection for which he is indebted to his library or to the suggestions of his own fancy, not to nature; for experience, her handmaid, speaks the reverse of this at the bed-side of the sick. The third objection, that heat renders the stomach relaxed, irritable, &c., in yellow fever; that vomiting is an early symptom in that disease, and difficult to allay; that black vomit is a sequel to frequent vomitings; and that the stomach is often found inflamed after death, rest for their whole force on the *gratuitous assumptions*, that emetics in a warm climate relax and irritate the stomach; that by producing frequent vomitings, they bring on black vomit, and that they *inflame* the stomach. Experience proves that all these objections, whether founded on such assumptions or not, are alike gratuitous and erroneous. I have thought proper to present Dr. Bancroft's objections to emetics in yellow fever, in a condensed form, before the public, that a work of several hundred pages, on yellow fever, published in *London*, and republished with notes by an American *professor*, may not induce any physician in this country, where truth is authority, and experiment the road to knowledge, to condemn emetics on Dr. Bancroft's objections, without examining into their validity, and testing them by experience. The only way to become acquainted with the properties of any remedy, and the states of the system to which it is adapted, is, not to

theorize about it, but to use it, and to observe the effects which it produces. For, in any other states of the system, different from those in which experience has found it to produce certain effects, without further experience, we know not what its effects will be. In all diseases, but particularly yellow fever, there is sometimes great difficulty in finding out what the real state of the system is. Without this knowledge, neither our own experience, nor that of others avails us aught. Symptoms cannot be always relied on, as indicative of the true state of the system. For symptoms like the external signs of the passions and powers of the mind, are no true evidence of what is *within*. To be so, there must be a fitness or relation between the external expressions, and every phenomenon which internal necessity from time to time evolves. Should opium, or any other remedy, on trial, evolve from some internal necessity of the system any phenomenon which had no relation to the symptoms, a key would thus be given by which the hidden nature of the disease, though under false colours, could be opened, examined and ascertained with as much ease, as the mental philosopher, by observing the relation or fitness between the outward signs and the emanations he may choose to call forth from within, unlocks, examines and ascertains the true character of man, whatever external pretentions he may have to knowledge or to virtue. But as it is only the mental philosopher who possesses the power of *testing* the human mind and human heart, and of profiting by it; so it is only the medical philosopher, who professes the power of *testing* the various morbid states of the system, and of profiting by such tests. The quack would probably be none the wiser of the actual morbid conditions of the system, or the remedies which should be used, if opium produced pain, if tonics debilitated, or if blood-letting and cold applications aggravated a local inflammation: but the medical philosopher, seeing the effects of any one of these *reagents* on the system, would better understand the nature of the disease, and would be better qualified to prescribe its appropriate remedy; because, having thus detected by reagents the real state of the system, he could avail himself both of his own, and the experience of others, in selecting his remedies, and would know what effects to *expect* from them. In chemistry, when our senses show us no differences in the properties of bodies, reagents often do; and in disease, when we can learn nothing from outward appearances of their true character, nature has put into our hands *reagents* by which we can

often test those internal derangements, which she may choose to veil from our sight. Whenever disease terminates fatally, *post mortem examinations*, by pointing out the parts affected and the extent of their derangement, promises to be of the greatest utility in many respects, but particularly in affording data, by which the connexion can be traced, between the symptoms of the disease, the effects produced on it by remediate agents, and the hitherto hidden organic derangements which terminated it. "Whenever morbid anatomy has been steadily adhered to," says Mr. Charles Bell, "as the foundation of observation and reasoning in our science, that science has been progressive: it has been interrupted in its course, even amidst the most brilliant reputation of its professors, whenever men have arisen whose inventive powers have led them to reject, rather than to seek, the aid of anatomy."

Having given in my former essay a general outline of the morbid anatomy of yellow fever, I shall, in the present, content myself with copying from my note book, some few of the cases contained in it, beginning with one in the yellow fever of 1825.

Mr. John Cochorn, aged about twenty-five, a robust, strong and healthy mechanic, I was called to see in the last stage of a protracted yellow fever. Black dissolved blood was oozing from his nose, and running out of the corners of his mouth on the bed-clothes. The wall and the floor were bespattered with the blood he had spit up. His skin was of a deep yellow, approaching to green; respiration from twelve to fifteen times in a minute; the rising and falling of the chest very irregular, heat of the surface below that of health. He had a shattered quill pulse, ominous of still greater hemorrhages. He had had the lotura carnium kind of stools, but his bowels were now constipated; vomited nearly every thing he took on his stomach, was extremely restless, and complained of some pain in his bowels, was sensible of every thing else but his dangerous situation. The night before I saw him, he had eaten a large quantity of stewed peaches. Turpentine, in half-ounce doses, allayed the irritability of the stomach, but did not operate on the bowels. Castor oil, magnesia, &c., were used until late the next day without effect. Five grains of opium were then given at a dose, which soon produced several copious feculent stools. The patient got better, and I had great hopes of his recovery. But the weather suddenly turned very cold, and he was in a room without fire and had but few bed-clothes. When I

called to see him, the morning after a very cold night, I found his skin cold, and his pulse scarcely perceptible, a watery purging had taken place, and the hemorrhages had increased. Death took place by the lungs, on the 23d of October, 1825. Five minutes afterwards, in presence of Drs. M'Pheeters and Hunt, I commenced the post obit examination.

The stomach and bowels were not inflamed. The veins of the bowels and mesentery were much congested with blood. The mucous membrane of the alimentary canal throughout, was thickly coated with a dark gelatinous substance, resembling, except in colour, coagulable lymph. The stomach and the duodenum contained a quantity of the matter termed black vomit. Introsusception had taken place in two or more places in the small intestines. These intestines were very much contracted in several places, and on moving the bowels, which were yet warm, I found that introsusception would readily take place. (This state of the bowels may account for the opium having purged him when nothing else would.) The spleen was enlarged. The liver presented no unusual appearance. The gall bladder was very much distended with a black ropy bile, but its coats were not black. The membranes, however, on the posterior part of the liver were inflamed, also the muscular. The membranes about the root of the cœliac artery were inflamed, but not so much so in less protracted cases. The semilunar ganglion and the plexuses of nerves proceeding from it, were evidently diseased, the fine tissue enveloping them being of a scarlet colour. The capsula renalis and the kidneys, were of a yellowish hue; the membranes near them were inflamed. The lungs appeared to have recently adhered to the ribs. In some places, bands of coagulable lymph extended from pleura pulmonalis to costalis. The membranes about the bifurcation of the trachea, and the fine tissues of the pulmonary arteries and veins, and the pulmonary plexus were inflamed. On cutting into the left lung, on its posterior part, an abundance of dark purulent matter oozed out, as if extravasated throughout its substance. Part of the left lung was found to be as heavy and as firm as liver. The right lung was less diseased than the left. There was nothing remarkable about the heart. The following were the only morbid appearances the brain presented: The tunica arachnoides, was a little turgid with blood only under the parietal bones. The plexus choroides was of a yellowish colour, and some places inclined to red. The ventricles contained a

little reddish serum. The dura and pia mater, brain, spinal marrow and medulla oblongata not perceptibly diseased. Mr. Cochorn lived about fourteen days from his first attack.

By way of contrast, I will now give the morbid appearances of a case in 1823, which terminated in twenty-four hours from the first attack.

September 16th, Mr. —— a Spaniard, aged thirty-five, attacked yesterday with yellow fever, and died to day at 2 o'clock. Black vomit came on before death; took no medicine. Immediately after death, Dr. Denny and myself made a post mortem examination. We found the omenta inflamed, the *mucous membrane* of the stomach, and all the coats of the duodenum: a small part of this bowel appeared to be in a gangrenous state. The other bowels were merely engorged with blood. Exterior covering of the right kidney inflamed; that of the left less so. Spleen of a healthy appearance. Liver of a greenish colour, somewhat enlarged from engorgement of black dissolved blood, blacker than in other parts of the system. Gall bladder of a black colour, filled with an inspissated black bile. The membranes involving the hepatic plexus of nerves, the semilunar ganglion and all the primitive plexuses proceeding from it were very much inflamed: so were those about the root of the lungs. We found the pia mater throughout its whole course, amidst the various convolutions of the cerebrum and cerebellum, highly inflamed. The tunica arachnoides was also inflamed, but not the dura mater. The ventricles were filled with a serous fluid.

Morbid anatomy of a case ending fatally on the third day, without reaction.—Mr. Andrias, a native of Sweden, aged thirty. *Symptoms.*—Skin cool; pulse seventy-five; tongue slightly furred; eyes red; a purulent secretion on the conjunctiva; complained of nothing but a slight pain in the head, and of debility. He had lost, in the first instance, a small quantity of blood from the arm, and had taken some medicine, which he said, had both puked and purged him, and had made him very weak. He continued rational until six or eight hours before death, when he became suddenly delirious, seized hold of a broom handle, and paraded the house, beating every thing he met with. His arm got to bleeding, previously to this great accession of strength, and from the appearances of the blood about the floor and bed, he must have bled two or three quarts. He continued, however, to beat the chairs, wall, &c., until he fell lifeless on the floor. *Antopsic appearances.*—The membranes of the brain, the

dura mater excepted, were very highly inflamed. The tissue immediately investing the medulla spinalis was of a light scarlet colour. Membranes about the root of the lungs, and those particularly investing the posterior pulmonary plexus, were black with inflammation. The lungs were heavy and abounded with a frothy substance. The tissues immediately investing the semilunar ganglion, and all the primitive plexuses, together with those near the situation of these plexuses, were very highly inflamed. The omenta, liver, gall bladder, spleen, kidneys and bowels, did not materially differ in their morbid appearances, from the preceding case. The duodenum, however, was only slightly inflamed in its mucous coat. The stomach was not diseased. It had no black vomit in it. It was filled with gruel which had been taken about a half-day before death. A remarkable phenomenon in this subject, was the facility with which the needle pierced the skin. The skin seemed as if it had lost its cohesive power in a very great degree; for it could be pierced nearly as easily with the eye, as the point of the needle. He was examined in the hospital, in September, about two hours after death.

Morbid anatomy of a case terminating on the third day, which had been attended with reaction, viz., hot skin, great pain, &c.—Mr. Schlegel, lately from the upper country, aged twenty-two, attacked on the 21st September, 1823, and died on the 23d. He took no medicine until after the occurrence of the black vomit, which happened on the third-day; the day his fever left him and the pain ceased. Purgatives were now used, combined with stimulants, but without effect. The meninges of the brain very slightly inflamed; the ventricles contained a serous fluid. The abdominal cavity, so called, contained several pounds of a yellow fluid. Stomach filled with black vomit, but none of its coats inflamed. The duodenum inflamed, particularly its peritoneal covering. Bowels introsuscepted in four places; lungs, liver, gall-bladder, kidneys, omenta, as in the case of the Spaniard above mentioned. The spleen enlarged, and scirrhous on its anterior part. The tissues investing the ganglions, and the nerves of organic life, of a deep scarlet. There was about an ounce of a gelatinous fluid of a yellow colour on the exterior part of the colon near the gall-bladder.

Morbid anatomy of a case wherein arterial reaction took place on the third, and death on the fifth day.—Mr Lee, aged about thirty; a stout robust man, had taken nothing but a dose of calomel and jalap, previously to the accession of

fatal symptoms. On opening the abdomen the parts in view pre ented little or no marks of disease. The mucous membrane of the stomach and duodenum were inflamed. On taking out the viscera, and turning their posterior part uppermost, the whole of the membranes on their posterior surface were highly inflamed. The membranes investing the abdominal and thoracic ganglions and their plexuses of nerves, were of a deep scarlet colour; so were those on the posterior part of the lungs. The heart contained about a dozen hydatids, which seemed to have been formed of coagulable lymph. They consisted of a delicate tissue, woven into numerous cells containing a yellow fluid. The ventricles and auricles were filled with these substances; they had peduncles extending into the arteries and veins. The vena cava ascendens, was inflamed throughout its course, up to the right auricle. The delicate tissue enclosing the lumbar and dorsal portions of the spinal marrow, was slightly inflamed. The iliacus internus and psoas muscles were very tender and could be easily torn.

Morbid anatomy of a case terminating on the ninth day.—Mr. Thomas Place, late of London, aged about thirty-five. Anomalous symptoms. Subsultus tendinum, trembling of the jaws, and keeping one eye occasionally shut. October 9th, two hours after death, body examined. Stomach, liver, and spleen, not found diseased. The ilium was introsuscepted in several places, and very much inflamed in all its coats. All the other bowels were inflamed, but less so than the ilium. The membranes investing the abdominal and thoracic ganglions, and the primitive ganglial plexuses, were of a bright scarlet colour, so were those about the root of the lungs.

Morbid anatomy of yellow fever immediately succeeding a violent intermittent of the tertian type.—Mr. Daniel Rook came into Natchez late in September, 1823, from the country, with intermittent fever. Before a week had elapsed, he was attacked with yellow fever, which proved fatal on the fourth day. When the latter disease attacked him, it so overwhelmed the system, that a short time after the attack, he became senseless, motionless, and speechless. He lay in this situation nearly a whole day. He at length recovered from it, and was able about the close of the second day to walk about his room. His friends supposed that his fever had intermitted, but no increase of heat on the surface had taken place, nor had there been any critical evacuation either by the skin, kidneys, or bowels, which invariably terminates a paroxysm of an intermittent. I considered his accession

of strength under these circumstances, not owing to an intermission of his former disease, but to the approach of the last stage of yellow fever. On the third day he fell into his former insensible state, and died early on the fourth. The heart was filled with hydatids, as in the case of Mr. Lee. The lungs, about the division of the trachea, were very much inflamed. The coats of the stomach and duodenum, were destitute *of one of the phenomena* of inflammation, viz., *redness* of the parts. But there were other phenomena which pointed out its *prior* existence, for the coats of those organs were of a *pale ash colour*, were very tender, and could be easily torn. The membranes investing the semilunar ganglion, and the ganglial plexuses, were of a scarlet colour. There was nothing remarkable in any other part except the *spleen*. This viscus was greatly enlarged, and fell to pieces on being handled, like a mass of coagulated blood.

Morbid anatomy of yellow fever, terminating on the fifteenth day, preceded by, and accompanied with, a hemorrhoidal affection.—Mr. Runnels, aged about forty, died on the 15th of October, 1823. Pulse, the last eight days, never more than seventy-five in a minute, and often not more than fifty, His body had a peculiarly strong cadaverous smell. He appeared rational on all subjects but one, viz., that the steward of the hospital wished to poison him. During his illness, he lost a considerable quantity of blood from the hemorrhoidal affection, and towards the close of his disease, a bleeding came on from the mouth and gums. Drs. Gustine and Denny, assisted in the post mortem examination. We found a large quantity of serum beneath the dura mater. Tunica arachnoides, pia mater, and plexus choroides, inflamed. The stomach, though examined closely by all of us, was not found diseased; it was filled with black vomit. Duodenum inflamed; liver not perceptibly diseased, except on its posterior surface; here its membranes in common with those on the posterior part of the viscera, were inflamed. The tissues investing the ganglial plexuses, and the ganglions themselves, particularly the semilunar, were of a deep scarlet colour. The lesser muscle of the diaphragm, and the psoas muscles, were greatly diseased. The whole of the rectum was black, and far more diseased than any other bowel.

Morbid anatomy of yellow fever occurring under a mercurial course.—Mr. L., died on the 29th of October, on the seventh day of his disease. He had had syphilis for nearly three months preceding his attack, and had rubbed himself with mercurial ointment, and had taken calomel pills, until his

mouth became sore. Believing that he was not liable to take any disease in this situation, he imprudently exposed himself to the atmosphere of yellow fever. He however, continued the mercurial course. At length he was suddenly attacked with yellow fever. Arterial reaction never took place. He lay most of the time in a comatose state, and was unable to swallow any thing. He had involuntary evacuations per anum, and occasionally threw up black vomit. Hemorrhages took place from the mouth and nose. His respiration from the commencement of the attack, was heavy, irregular and laborious. Post obit. examination was commenced immediately after his decease. The brain was but slightly affected. On taking out the brain, a large quantity of a yellow serous fluid, made its way into the cranium, from the spinal column. The heart contained several hydatids, each two or three inches in length. The lungs were very much engorged with blood, and were inflamed in their posterior part. The membranes on the whole face of the descending aorta, down to its bifurcation, were very much inflamed; so were the tissues investing the great plexuses of the nerves of organic life. The diaphragm, and psoas muscles, were very much diseased. The stomach and spleen, presented nothing unusual, except the last, which was very soft. The duodenum and liver, were both highly diseased; the liver was actually black.

Morbid anatomy of yellow fever succeeding dysentery.—Mr. R. Bell, had an intermittent for some time which terminated in dysentery. With the latter complaint, he became exposed to the atmosphere of yellow fever; in a few days took that disease while having dysentery, and died in three days, October 30th, 1823. His disease was never attended with reaction, and he complained of no pain whatever. He appeared perfectly rational on the most of subjects, but would occasionally grin, look amazed, start suddenly, and talk of making up by industry, the time he had lost by sickness. This last was not a matter of talk only, for he procured some leather, and a set of tools, and nearly finished making a shoe, during the accession of strength which took place in the last stage of his disease.

The tunica arachnoides, inflamed; so was the pia mater throughout its whole course, around the convolutions of the cerebrum and cerebellum. The right ventricle of the heart contained an inflamed spot, the size of a dime. The cellular substance investing the vena cava ascendens up to the auricle, and that about the aorta, from the heart to the iliacs, was highly inflamed. The membranes investing the whole of

the abdominal and thoracic ganglions, and their primitive plexuses were highly inflamed. The liver was of a deep green hue, and the membranes about the lobus spigelii much inflamed. An inky looking fluid was contained in the gall bladder. The mucous coat of the stomach was inflamed in patches. The peritoneal coat was likewise inflamed, but not the muscular. The duodenum inflamed in all its coats, and mortified a few inches from the pylorus. The omenta inflamed; the diaphragm also towards its origin from the lumbar vertebra. The mesocolon enclosing the pancreas, and the membranes investing the kidneys, together with the kidneys themselves inflamed. The jejunum, ilium, and mesentry conjested. The most unusual appearance in this case was a violent inflammation of the colon; this bowel was black *from end to end.*

Morbid anatomy of yellow fever succeeding cholera morbus. —Mr. ——, on his way from Baton Rouge, to Natchez, in September 1823, was attacked with cholera morbus. He had just recovered when he arrived in Natchez. In three or four days he was attacked with yellow fever, but he mistook it for a return of his cholera morbus. He treated himself by stimulants, as toddy, laudanum, &c., he died on the fourth day with black vomit. The stomach was very much inflamed, both in its mucous and peritoneal coats; so was the duodenum. The liver was very much congested with blood and enlarged; the gall bladder was filled with a black inspissated bile. The jejunum, ilium, and colon, were here and there enormously distended with flatus. Mr. Sharp, who was standing by me when one of these inflated portions was pierced, nearly fainted in consequence of the dreadful odour, which instantly filled the room. (It is not a common occurrence for the stomach, or the bowels, to be much distended with flatus, after death in yellow fever, although flatulent symptoms attend the disease, nor is it common for the contents of the stomach or bowels, or any part of the subject, provided the dissection be made soon after death, to be attended with a smell more disagreeable, than in subjects who have suddenly died from casualities.) The kidneys were inflamed, the right kidney the most so. The cellular substance involving the primitive ganglial plexuses, and the abdominal and thoracic ganglions, was of a bright scarlet colour. The mucous membrane of the whole alimentary canal, was thickly coated with a slimy substance, like jelly. [This slimy substance, more or less abounded in nearly every case of yellow fever; sometimes it resembled muco-purulent matter, in

some cases, it looked like pus mixed with blood. But the sanguineo-purulent matter, was less common than a white or brown gelatinous substance, resembling coagulable lymph.]

Morbid Anatomy of yellow fever, supervening on a debilitated state of the system of three months standing.—Mr. M'Intyr, dissected October 4th, 1823. Mucous membrane of the stomach inflamed. Duodenum black. The membranes on the posterior part of the liver, and those investing its great vessels, were highly inflamed. The kidneys, and the cellular substance in which they are imbedded, inflamed. The bladder much distended with urine. The psoas and iliacus internus muscles, very tender and quite black. The stomach and bowels, were lined with mucopurulent matter. The black vomit was found no where else but in the *rectum*; this bowel was not diseased. The pia mater was slightly inflamed; nothing else remarkable about the brain. The spinal marrow was examined from atlas to coxcyx. The tissues investing the cervical and dorsal portions, not diseased; but those investing the lumbar and sacral portions, slightly inflamed. The fine membrane immediately around the nerves going to the lower extremities, was inflamed. The whole of the tissues forming the meshes of the ganglial plexuses, and those immediately investing the ganglions, were very highly inflamed. [In the above case, there had been violent cramps and spasms of the muscles of the legs. When this symptom has been troublesome and violent, I have nearly always found some one, or all, of the fine tissues inflamed, which immediately invest the nerves going to the lower extremities.]

Morbid anatomy of a case of the New Orleans yellow fever of 1824, *which occurred nearly two months after exposure to the contaminated atmosphere.*—Mr. Fothergill, after remaining more than a month in New Orleans, at a time when the yellow fever was prevailing there with great mortality, fled from that place to Natchez, which was then healthy. He walked the last forty-five miles of his journey, which he said fatigued him very much. When he got to Natchez, he felt very unwell, and lay in a damp, cold room. It was in the month of November; the days were warm, but the nights quite cold. He had been unwell ever since his departure from New Orleans, but had had no definite ailment. On account of his uneasy feelings, he had, about the time he came to Natchez, resorted to the use of ardent spirits, to which he had not been accustomed. In a few days after his

arrival in Natchez, he was attacked with a violent pain in his bowels; believing it to be colic, he took a dose of castor oil, which puked him. His stomach now became so irritable, that nothing would lay on it; bowels constipated. On the third day of his attack, I was called to see him. As I found him with an obstinate vomiting, pain and constipation of the bowels, with little or no febrile symptoms, I concluded he had bilious colic, and ordered blood-letting, calomel, warm bath, blistering, injections, &c. Five or six dark, thin evacuations from the bowels were procured by night. When I visited him the next day, I found him sitting by the fire; he politely got up and handed me a chair. He walked several times across the room, told me that his medicine had operated, and he was now entirely free from pain. His countenance looked bad, his skin had turned yellow, and his breathing was irregular and laborious. An attendant observed to him in jest, "that he breathed like the ticking of an old watch, and looked like he had been frightened out of his wits." His eyes had been red since the time I first saw him, but this I attributed to his late indulgence in ardent spirits. I directed the blistering plaster, which had not drawn, to be reapplied, and a dose of castor oil to be given. It never operated. He died twelve hours afterwards. Dr. M'Pheeters and myself, examined him after death. On opening the abdomen, neither the colon, nor any other bowel appeared to be at all diseased. There were no introsusceptions in the bowels. On opening them, the mucous membrane of the colon and duodenum, was inflamed and lined with a sanguineo-muco-purulent matter. The mucous coat of the other bowels was not inflamed, it was, however, congested with blood. The stomach was inflamed in its mucous membrane. Spleen somewhat enlarged. Liver of a greenish hue; gall bladder filled with a black inspissated bile. Kidneys, and the cellular substance about them, inflamed. Omenta inflamed. There were effusions of lymph on some parts of the colon. Heart had in it an hydatid, which extended its peduncles into the arteries. The posterior part of the lungs about the division of the trachea, very highly inflamed. The membranes on the face of the aorta, and those investing the ganglions, and forming the meshes of the ganglial plexuses, were, as in *every case* of yellow fever I have yet met with, highly inflamed.

(*To be continued.*)

I here subjoin a Meteorological Table for 1824, kept by Drs. Hunt and M'Pheeters, and also one for 1825, by Dr. H. Tooly. The thermometer in 1824, was examined at 7 o'clock A. M., and 3'oclock P. M.; in 1825, at 5 o'clock A. M., and 4 o'clock P. M. The former, are some little warmer periods of the day than the latter. Both were thermometers of Fahrenheit, and stood in the shade exposed to a free circulation of air.

In the winter of 1824, the principal diseases, were bilious pneumony, sporadic typhous, pleurisy, and measles.

Spring.—Pneumonia, dysentery, bilious remittent, and intermittent fever.

Summer.—Coup de soleil, congestive fever, (I mean a fever which runs its course in a few days without remitting,) remittent bilious fever.

Autumn.—Bilious remittent, and intermittent fevers.

1825, *Winter.*—Bilious pneumony, and sporadic typhous.

Spring.—Bilious pneumony, and sporadic dysentery.

Summer.—Bilious, and congestive fevers, late in summer, yellow fever in town.

Autumn.—Yellow fever in Natchez and Washington, also bilious and congestive fevers in those places, and in the country.

Late in Autumn, and in the beginning of winter, jaundice and bilious pneumony.

METEOROLOGICAL TABLE.

		1824 7 A. M.	3 P. M.		1825 5 A. M.	4 P. M.	
Jan.	1	67	74	cloudy	36	48	clear
	2	64	71	cloudy	34	46	clear
	3	60	71	cloudy	35	44	rain
	4	62	72	clear	40	43	rain
	5	67	74	cloudy	41	45	rain
	6	64	59	rain	42	47	cloudy
	7	49	68	clear	57	51	cloudy
	8	56	65	rain	51	62	rain
	9	62	72	cloudy	58	68	rain
	10	68	75	cloudy	50	61	cloudy
	11	70	74	rain	41	51	clear
	12	66	74	cloudy	42	52	rain
	13	69	75	cloudy	50	53	rain
	14	67	62	rain	50	64	cloudy
	15	44	48	rain	57	69	cloudy
	16	44	54	cloudy	55	64	clear
	17	42	55	cloudy	58	59	rain
	18	46	57	cloudy	53	54	rain
	19	32	49	clear	47	48	rain
	20	30	52	cloudy	48	53	rain
	21	44	58	rain	48	45	rain
	22	51	67	cloudy	33	46	clear
	23	57	67	rain	31	51	clear
	24	64	60	rain	34	51	clear
	25	50	52	cloudy	34	55	cloudy
	26	44	55	clear	45	56	cloudy
	27	44	54	rain	42	60	cloudy
	28	32	58	clear	45	66	clear
	29	42	66	clear	46	62	cloudy
	30	48	56	clear	40	60	cloudy
	31	28	34	clear	49	50	rain
Mean heat		52 2-3	62 1-5		44 1-4	54 1-2	

		1824 7 A. M.	3 P. M.		1825 5 A. M.	4 P. M.	
Feb.	1	20	40	clear	45	47	cloudy
	2	30	34	snow	34	45	clear
	3	34	38	rain	30	47	clear
	4	34	40	cloudy	35	55	clear
	5	25	46	cloudy	42	65	clear
	6	38	50	cloudy	46	65	clear
	7	50	66	rain	43	71	clear
	8	55	68	clear	47	67	cloudy
	9	50	69	rain	58	62	rain
	10	64	72	cloudy	63	72	rain
	11	55	42	rain	57	72	clear
	12	26	46	clear	54	64	cloudy
	13	32	60	rain	57	59	rain
	14	46	56	clear	51	51	rain
	15	38	54	clear	42	58	clear
	16	46	70	clear	48	65	clear
	17	54	72	clear	53	67	clear
	18	61	55	rain	51	63	cloudy
	19	34	61	clear	52	52	rain
	20	54	60	rain	52	64	cloudy
	21	54	60	cloudy	52	62	cloudy
	22	55	60	cloudy	49	67	clear
	23	36	59	clear	50	71	clear
	24	43	62	clear	60	65	rain
	25	55	64	rain	57	70	clear
	26	36	46	clear	60	77	clear
	27	30	50	clear	57	82	cloudy
	28	56	70	clear	70	76	rain
	29	55	71	clear			
Mean heat		43 2-3	57		46 3-4	62 3-4	

		1824 7 A. M.	3 P. M.		1825 5 A. M.	4 P. M.	
March,	1	60	71	clear	57	66	clear
	2	63	74	cloudy	51	64	clear
	3	65	76	clear	56	56	rain
	4	70	74	rain	47	65	clear
	5	60	60	rain	51	71	clear
	6	50	59	clear	60	72	rain
	7	52	62	cloudy	57	65	clear
	8	46	62	clear	53	58	rain
	9	48	64	clear	45	65	clear
	10	50	71	clear	51	69	rain
	11	61	69	rain	50	69	clear
	12	65	72	rain	52	73	rain
	13	68	62	rain	59	80	cloudy
	14	60	70	rain	61	74	rain
	15	69	72	rain	64	71	rain
	16	56	67	rain	58	67	clear
	17	58	70	clear	50	65	clear
	18	56	74	clear	48	68	clear
	19	68	78	cloudy	53	77	clear
	20	70	81	clear	58	81	clear
	21	72	81	cloudy	55	77	clear
	22	73	72	rain	61	75	cloudy
	23	67	70	rain	65	74	rain
	24	71	75	rain	66	69	rain
	25	72	80	rain	58	72	rain
	26	70	75	rain	54	76	clear
	27	66	69	rain	61	82	clear
	28	50	60	cloudy	64	83	cloudy
	29	40	65	clear	64	78	rain
	30	46	48	cloudy	72	78	cloudy
	31	56	68	clear	55	69	rain
Mean heat		60 1-4	69 1-2		56 1-2	72 1-4	

METEOROLOGICAL TABLE.

		1824			1825		
		7 A. M.	3 P. M.		5 A. M.	4 P. M.	
April,	1	52	62	clear	57	64	clear
	2	51	65	clear	50	71	clear
	3	52	54	rain	52	73	clear
	4	55	61	cloudy	57	74	clear
	5	62	69	rain	62	62	rain
	6	62	68	clear	62	73	rain
	7	54	70	clear	63	76	rain
	8	61	70	clear	62	79	clear
	9	64	70	rain	65	76	cloudy
	10	61	75	clear	67	75	rain
	11	60	70	clear	64	70	rain
	12	60	73	clear	64	76	rain
	13	65	76	clear	64	76	rain
	14	60	64	rain	63	59	rain
	15	54	64	clear	56	72	cloudy
	16	58	68	clear	56	72	cloudy
	17	64	68	cloudy	56	72	rain
	18	64	72	clear	65	77	cloudy
	19	65	75	clear	66	76	clear
	20	58	73	cloudy	59	68	cloudy
	21	61	71	rain	52	74	clear
	22	61	68	rain	55	75	clear
	23	64	77	clear	61	71	rain
	24	68	82	clear	68	80	rain
	25	73	86	clear	66	73	rain
	26	76	86	rain	65	65	rain
	27	66	76	rain	65	75	rain
	28	69	72	rain	69	74	rain
	29	67	70	rain	56	69	clear
	30	67	68	rain	54	77	clear
Mean heat,		62	70	3-4	60	3-4	67

		1824			1825		
		7 A. M.	3 P. M.		5 A. M.	4 P. M.	
May,	1	68	77	cloudy	59	79	clear
	2	70	79	rain	64	81	clear
	3	70	82	clear	64	78	clear
	4	69	78	cloudy	69	78	rain
	5	69	84	clear	74	84	cloudy
	6	70	85	clear	74	86	rain
	7	74	84	cloudy	67	81	rain
	8	78	86	clear	71	82	cloudy
	9	78	77	rain	74	75	rain
	10	69	82	cloudy	65	83	rain
	11	76	87	clear	70	83	clear
	12	76	88	clear	70	83	clear
	13	77	84	rain	72	86	clear
	14	71	86	clear	71	80	rain
	15	77	86	clear	72	78	rain
	16	76	84	cloudy	65	80	clear
	17	76	85	cloudy	67	83	clear
	18	77	88	clear	70	84	clear
	19	76	87	clear	68	83	clear
	20	75	80	cloudy	71	84	clear
	21	66	73	cloudy	72	84	clear
	22	52	76	cloudy	73	86	clear
	23	66	75	clear	72	87	rain
	24	66	78	clear	73	84	cloudy
	25	68	81	clear	72	86	cloudy
	26	67	81	clear	72	87	clear
	27	70	84	clear	74	90	clear
	28	70	87	clear	76	90	clear
	29	72	89	rain	77	89	clear
	30	80	82	rain	76	90	clear
	31	72	85	clear	78	88	clear
Mean heat		72	83		70	3-4	83 1-4

		1824			1825		
		7 A. M.	3 P. M.		5 A. M.	4 P. M.	
June,	1	72	85	cloudy	75	83	clear
	2	76	87	clear	68	82	clear
	3	78	89	clear	66	81	clear
	4	80	92	clear	65	81	clear
	5	80	92	clear	65	85	clear
	6	80	92	clear	69	86	clear
	7	78	91	clear	69	86	clear
	8	78	90	rain	72	89	clear
	9	79	78	rain	75	89	clear
	10	72	84	clear	76	75	clear
	11	76	91	cloudy	72	73	rain
	12	78	91	clear	71	86	rain
	13	82	92	clear	75	88	clear
	14	79	90	clear	77	90	rain
	15	80	91	clear	77	90	clear
	16	78	93	clear	75	90	rain
	17	80	91	clear	78	91	clear
	18	82	92	clear	78	85	rain
	19	80	89	rain	75	85	clear
	20	79	89	clear	77	89	cloudy
	21	81	91	clear	76	88	rain
	22	80	92	clear	75	89	rain
	23	81	89	clear	78	85	clear
	24	80	91	rain	77	81	rain
	25	81	91	clear	76	88	rain
	26	81	93	clear	77	88	clear
	27	82	92	clear	79	89	clear
	28	82	92	clear	75	89	rain
	29	80	93	clear	78	84	clear
	30	82	94	clear	75	83	rain
Mean heat		79	1-5	90	1-5	74	82 1-3

METEOROLOGICAL TABLE.

		1824			1825		
		7 A. M.	3 P. M.		5 A. M.	4 P. M.	
July	1	80	92	clear	76	83	rain
	2	78	94	clear	75	83	cloudy
	3	80	94	clear	75	78	rain
	4	80	92	clear	72	76	rain
	5	80	92	clear	74	83	rain
	6	79	90	rain	75	89	clear
	7	80	92	clear	76	90	clear
	8	80	90	rain	79	91	cloudy
	9	79	84	rain	76	91	rain
	10	76	88	clear	77	91	clear
	11	80	91	clear	77	87	cloudy
	12	82	92	clear	76	77	rain
	13	81	92	clear	74	86	cloudy
	14	81	93	clear	77	85	rain
	15	82	93	cloudy	77	85	rain
	16	80	92	clear	77	89	clear
	17	80	94	clear	96	91	clear
	18	82	94	clear	78	92	clear
	19	82	94	clear	78	83	rain
	20	82	94	clear	75	87	cloudy
	21	85	91	clear	75	85	clear
	22	80	93	clear	75	79	rain
	23	82	95	clear	75	82	rain
	24	82	97	rain	76	86	cloudy
	25	78	90	cloudy	75	87	clear
	26	82	93	clear	75	86	clear
	27	82	84	rain	75	88	clear
	28	78	89	rain	75	90	clear
	29	80	90	rain	77	92	clear
	30	82	89	cloudy	80	91½	rain
	31	80	91	clear	79	94	clear
Mean heat		80 1-2	91	1-2	76	86	

		1824			1825		
		7 A. M.	3 P. M.		5 A. M.	4 P. M.	
Aug.	1	81	92	clear	81	93	clear
	2	82	92	clear	78	89	clear
	3	82	94	clear	73	88	clear
	4	83	95	clear	72	90	rain
	5	80	90	clear	76	93	clear
	6	75	91	clear	77	91	clear
	7	78	92	clear	76	91	clear
	8	81	93	clear	78	94	clear
	9	82	82	rain	79	96	clear
	10	77	85	cloudy	80	97	clear
	11	78	84	rain	80	97	clear
	12	76	84	rain	82	95	rain
	13	79	78	rain	78	94	clear
	14	77	84	rain	79	95	clear
	15	76	86	clear	79	92	rain
	16	75	87	clear	80	96½	clear
	17	78	87	clear	81	92½	rain
	18	76	88	clear	78	87	rain
	19	76	91	clear	79	91	rain
	20	80	91	clear	79	89	rain
	21	83	92	clear	78	81	rain
	22	82	90	clear	72	85	clear
	23	82	93	clear	73	87	clear
	24	80	86	rain	75	90	clear
	25	79	91	cloudy	76	91	clear
	26	78	80	rain	79	87	rain
	27	75	82	rain	78	88	rain
	28	74	84	clear	76	85	rain
	29	75	86	clear	77	90	clear
	30	72	77	rain	78	92	clear
	31	69	80	clear	76	91	clear
Mean heat		78	87		76	91	

		1824			1825		
		7 A. M.	3 P. M.		5 A. M.	4 P. M.	
Sept.	1	68	87	clear	78	93	clear
	2	77	91	clear	79	9[illegible]	clear
	3	79	83	cloudy	79	88	cloudy
	4	75	85	clear	78	85	rain
	5	72	82	clear	79	87	rain
	6	69	83	clear	78	83	rain
	7	71	85	clear	76	75	rain
	8	71	75	cloudy	63	78	clear
	9	61	72	clear	60	76	clear
	10	61	78	clear	59	79	clear
	11	67	80	cloudy	62	83	clear
	12	67	82	clear	66	83	clear
	13	70	83	clear	69	86	clear
	14	72	87	clear	69	86	clear
	15	73	88	clear	69	87	cloudy
	16	78	82	cloudy	73	87	cloudy
	17	74	84	clear	74	88	clear
	18	71	82	cloudy	72	87	clear
	19	71	86	clear	72	91	clear
	20	74	83	cloudy	76	90	clear
	21	73	81	rain	75	91	clear
	22	73	78	rain	77	91	cloudy
	23	72	79	rain	72	84	rain
	24	76	81	rain	72	83	cloudy
	25	75	79	rain	71	81	clear
	26	75	81	clear	67	73	cloudy
	27	70	83	clear	58	73	clear
	28	75	87	clear	57	77	clear
	29	68	75	clear	60	80	clear
	30	62	72	clear	59	80	clear
Mean heat		71 1-3	81	3-4	71	83	

METEOROLOGICAL TABLE.

		1824			1825	
		7 A. M.	3 P. M.		5 A. M.	4 P. M.
Oct.	1	60	72	clear	61	80 clear
	2	61	74	clear	62	82 clear
	3	62	79	clear	66	87 clear
	4	70	84	rain	67	86 clear
	5	70	76	cloudy	72	90 clear
	6	67	72	clear	72	91 clear
	7	62	74	clear	77	88 clear
	8	66	79	clear	72	89 clear
	9	73	76	rain	72	89 clear
	10	74	74	rain	70	84 cloudy
	11	74	82	cloudy	75	89 cloudy
	12	72	73	rain	72	90 clear
	13	71	74	rain	72	91 clear
	14	57	60	cloudy	73	91 clear
	15	56	66	clear	73	89 rain
	16	57	69	clear	71	72 rain
	17	58	73	cloudy	52	65 clear
	18	65	76	cloudy	48	65 clear
	19	67	73	rain	44	69 clear
	20	69	61	rain	45	73 clear
	21	52	62	clear	49	79 clear
	22	52	67	clear	54	79 clear
	23	54	70	clear	63	82 clear
	24	58	76	cloudy	66	83 clear
	25	68	78	rain	68	80 clear
	26	62	65	clear	66	80 rain
	27	54	69	clear	52	60 clear
	28	55	68	clear	42	58 clear
	29	54	62	clear	40	63 clear
	30	48	62	clear	44	69 clear
	31	52	70	clear	49	75 clear
Mean heat		62	71 1-2		61 1-2	80

		1824			1825	
		7 A. M.	3 P. M.		5 A. M.	4 P. M.
Nov.	1	56	70	clear	52	78 clear
	2	54	72	clear	57	75 clear
	3	56	74	clear	56	79 clear
	4	62	73	cloudy	68	79 cloudy
	5	60	68	clear	65	82 clear
	6	52	64	cloudy	68	76 cloudy
	7	61	70	rain	72	71 rain
	8	67	68	rain	46	43 rain
	9	55	59	cloudy	39	53 clear
	10	48	55	cloudy	39	58 clear
	11	51	58	cloudy	40	64 clear
	12	53	69	clear	46	71 clear
	13	58	67	cloudy	63	65 rain
	14	67	66	rain	52	61 cloudy
	15	54	53	rain	43	63 clear
	16	43	51	clear	38½	61 clear
	17	40	48	clear	49	55 cloudy
	18	30	46	clear	38	49 clear
	19	24	44	clear	41	50 cloudy
	20	28	55	clear	48	61 cloudy
	21	45	65	clear	52	65 cloudy
	22	47	68	clear	56	69 rain
	23	48	68	clear	56	57 rain
	24	49	71	clear	54	54 rain
	25	50	73	clear	53	55 cloudy
	26	64	72	cloudy	53	58 cloudy
	27	64	73	clear	57	68 cloudy
	28	64	74	cloudy	55	72 cloudy
	29	64	74	clear	63	55 rain
	30	70	78	clear	43	56 cloudy
Mean heat		52 3-4	61 1-2		52 1-2	61 1-4

		1824			1825	
		7 A. M.	3 P. M.		5 A. M.	4 P. M.
Dec.	1	70	66	rain	37	40 cloudy
	2	44	56	clear	28	36 clear
	3	42	56	clear	27	42 clear
	4	34	56	cloudy	27	44 clear
	5	44	64	rain	36	51 clear
	6	47	57	rain	32	56 clear
	7	40	50	cloudy	39	63 clear
	8	36	52	rain	49	70 rain
	9	48	58	rain	50	52 clear
	10	66	72	rain	37	46 clear
	11	68	72	rain	31	51 clear
	12	72	73	rain	43	64 clear
	13	66	66	rain	33	47 clear
	14	38	52	clear	35	60 clear
	15	38	56	clear	53	63 rain
	16	60	66	rain	47	48 cloudy
	17	58	46	cloudy	38	49 cloudy
	18	28	48	clear	36	53 clear
	19	30	50	clear	43	67 clear
	20	26	55	clear	38	47 clear
	21	38	60	clear	33	50 clear
	22	30	64	clear	38	58 cloudy
	23	38	55	clear	52	62 cloudy
	24	37	62	clear	58	68 rain
	25	40	62	cloudy	54	44 rain
	26	58	68	rain	34	49 clear
	27	58	65	rain	35	56 clear
	28	58	65	clear	45	52 rain
	29	58	60	cloudy	44	36 rain
	30	50	60	cloudy	33	43 cloudy
	31	44	50	rain	40	45 cloudy
Mean heat		47 1-3	59 1-2		38	52

This is perhaps one of the most interesting papers ever submitted to the medical public, not only from the circumstance, that the temperature of our summers, in close and unventilated situations may produce disease extensively from animal exhalations, but that even the yellow fever may be its result in places removed from tide water; it therefore brings home the subject in its most imposing form to the feelings and the principles of the profession, and gives the noxious nature of animal exhalation an interest, which, to the thoughtful and the judicious, has been sufficiently disclosed in the records of medicine, but which, since the publication of Bancroft, has been unwarily overlooked, and has given to a contrary opinion, a currency, which has, it is to be feared, been the cause of much detriment to the community: as the subject is now brought before the reader in an imposing light, it may not be irrelevant to state some of the prominent facts which medicine affords upon the subject.

The question, in the first place, has a positive and a negative side: animal exhalations are noxious, or they are not; and with regard to them, the nature of the proof to be adduced is very different: to prove the positive, or that they are noxious, one instance alone is sufficient; to prove the negative side of the question, or that they are not noxious, it would be necessary to show that under the infinite varieties of exposure, temperature, and other circumstances, in no one instance had it taken place; which is impossible, and beyond the power of any individual. The slightest monitions then, of the pernicious influence of this kind of exhalation, would, we should suppose, be sufficient to deter from the adoption of the idea, that these miasms did not produce a noxious effect.

1. With regard to their influence on individuals.

They produce asphyxia, gastric distress, giddiness, and nervous tremours, as in the instance of the removal of the dead bodies of the burial place of the Innocents, in Paris.

They produce ophthalmia, diarrhœa, and dysentery; as in the facts related of the removal of the contents of the necessaries of the great hotels of Paris.* They produce death in individuals; Lancisi relates, that the exhalations from a dead ox killed a traveller near Pesaro.† Huxham states, that at the Oxford assizes, several prisoners communicated a fatal

* See the Philadelphia Journal, for Feb. 1825.

† De Bovill. Peste p. 1. quoted by Pi'attoli's Memoir, N. Y. 1823.

disease to persons in the court, where they were tried, and depopulated the cells they passed through in leaving the prison. They produced the plague in four persons, who opened, in digging a grave, the coffin of a person lately interred, near Canton; the two immediately engaged, fell lifeless on inhaling the effluvium. They both died within five days. The third man, about the eighth day, had a violent attack, with inguinal swellings. The indisposition of the fourth was slight.*

They produce epidemics: Haller† states, that the members of a convent became ill from the exposure of a single corpse after twelve years interment. Dr. Pringle has observed the same effect in crowded hospitals. Ambrose Parey states, that an epidemic appeared in Tuscany from the putrefaction of a whale;‡ a pestilential fever in Dublin, originated from the exhalations from a church-yard, in the year 1740. To conclude, the noxious influence of the stench arising from fields of battle, in producing epidemics, so much abounds in history, that war and pestilence, are frequently associated as concomitant evils.

EDITOR.

ART. II. *Case of Inguinal Aneurism, in which the operation of securing the external Iliac Artery by ligature was performed with success.* By DAVID L. ROGERS, M. D. Demonstrator of Surgery in the College of Physicians and Surgeons of New-York. Communicated by P. CADWALLADER, Licentiate in Medicine. New-York, Jan. 1826.

Mr. D., the subject of the following case, for the period of fourteen years, laboured under a troublesome inguinal hernia; to obviate the inconvenience of which, a truss was applied. His calling being of an active kind, necessarily aggravated his complaint, insomuch that a truss of ordinary elasticity was wholly insufficient to confine the hernial contents within the abdomen. This circumstance induced him to substitute another of much greater firmness; this instrument answered his expectations, in relation to the rupture, but it was not,

* Johnson's Journal, for Jan. 1825.
† Pascalis on the Danger of Interment in Cities. p. 78.
‡ Ibid.

however, unattended with difficulties. By the firm and constant pressure which it exerted on the parts, much pain and irritation were produced. In this condition he continued to attend to his daily avocations, until three or four weeks previous to the operation, when he became alarmed at the appearance of a small pulsating tumour in his left groin, immediately below the crural ligament. The tumour gradually enlarged, and had acquired the size of a billiard ball, when his physician was summoned to attend, who made known to him the nature of his disease, and advised immediate surgical aid.

Dr. D. L. Rogers was accordingly called in, and on examination, an aneurism of the inguinal artery, of considerable magnitude presented, one third of which, extended under Poupart's Ligament. An operation was decided on, and, in the presence of Dr. Mott and several other professional gentlemen, was commenced, by making an incision through the integuments, beginning an inch from the anterior superior spine of the ilium, and extending with a slight curve, obliquely downward and forward to midway between the internal abdominal ring and the crural arch;—the contiguity of the epigastric artery to the internal ring, prevented a further extension of the incision forward. The first incision (which was much increased in depth, owing to the thickened state of the skin and cellular membrane, from the action of the truss and effusion) exposed the aponeurotic expansion of the external oblique muscle; this being divided in the same direction, and turned up, brought to view the inferior margin of the internal oblique, which, together with the transversalis abdominis muscle, being raised, the internal abdominal ring was laid bare. Here it may not be amiss to observe, that the hernia, by its constant protrusion, was no small hindrance to the easy performance of this operation. With the finger and handle of the scalpel, the ring was sufficiently enlarged to admit the introduction of the fingers behind the peritoneum, and brought in contact with the artery; the sheath of the vessels was now to be opened, but owing to the extreme inquietude of the patient, and the unusual depth of the wound, it was deemed unadvisable to use the knife, the finger nail was therefore substituted; a single ligature was passed round the artery, and tied about half an inch below the bifurcation of the common iliac. The wound was brought together and dressed, in the usual manner, with adhesive straps. The patient recovered in six weeks, and continues to enjoy good health. The hernia has not reappeared since the operation;

the closure of the internal ring from inflammation, accounts for this.

The history above given, of this case, evidently shows that the pressure of the truss, was the sole and only assignable cause of the aneurism. But to expatiate on the pathology and treatment of aneurisms is not the present intention. The principal incentive in noticing this case is the favourable opportunity it presents of adverting, though in a brief manner, to an observation of Mr. Larrey's, touching the propriety of tying the external iliac for the cure of aneurisms. It has been asserted by that gentleman, "that almost all the subjects who had undergone this operation, showed all the characters of aneurismal diathesis;" and the assertion wound up with the interrogatory—"What purpose can the operation serve?"* By this observation an extensive field, for discussion and comment, is thrown open; but to enter with free latitude into the argument, would be to protract this paper beyond its destined limits; all, therefore, that will be attempted, will be to call to mind a few well authenticated facts, with the view of proving the invalidity of the Baron's remark.

In the year 1796, Mr. Abernethy first performed the operation of tying the external iliac for aneurism. Since that period to the present, the result of similar practice, in numerous instances, has been most decidedly favourable. A long list of cases, of this operation, may be seen in a "Treatise on the Diseases of Arteries and Veins" by Dr. Joseph Hodgson. Out of this number, amounting to twenty two, fifteen cases of complete recovery are noticed, and but *one* case mentioned as having died of a subsequent aneurism, and that was beyond the reach of surgical aid, being at the arch of the aorta. In the Med. Chir. Review, of Sept. 1821, the major part of the above cases are referred to, with others of successful termination, by British surgeons. Other numbers of the same Journal contain irrefragable proof of the utility of this operation. In the number of March 1822, a case of this operation is published by Mr. Salmon; the aneurism had existed *ten* months. At the end of two months after the operation, the patient was discharged in good health. Thus much for the success of trans-Atlantic surgery, in the treatment of inguinal aneurisms. Here, the evidence in support of the propriety, and, as far as respects the security of the patient, the imperious necessity of this operation, might cease, as being fully

* See Review of Baron Larrey's Russian Campaign, in Med. Chir. Journal, Sept. 1821.

sufficient to establish it as an axiom of surgery. But it is no more than just to observe, that cis-Atlantic practice, in like cases, has not been less fortunate. The operation of ligature of the external iliac has been performed, if I mistake not, six times in this country; and in no instance has it been followed by a recurrence of aneurism. In this city (N. Y.) a case occurred in which the external iliac on one side, and the femoral artery on the other, in the same individual, were successively tied for the cure of aneurism.* In this patient, it must be admitted, there were the most just grounds for the suspicion, that there existed a peculiar constitutional predisposition to aneurism, if, emphatically speaking, such a state of the arterial system ever did exist. Notwithstanding, he perfectly recovered, and still lives in the enjoyment of good health.

In taking a retrospective glance over the archives of surgery, it appears that the cases above cited are nearly, if not quite, all that can be collected of this operation; and out of these, very few deaths are recorded. If this be the fact, it seems to insinuate, that M. Larrey has had few opportunities indeed, of investigating the truth of his argument by post mortem examinations of such subjects. Reason, therefore, dictates, that what he advances, in relation to the operation in question, is untenable.

Could we, for a moment, reconcile such doctrine to our minds, as valid and satisfactory—might not the following interrogatories, with exclusive right be put: what should be our rule of conduct when called to see a patient labouring under this most terrific malady? Should we, as conscientious men, weigh the matter in the balance of sound reasoning, and cool, unprejudiced reflection, and as the result of those deliberations, decide on an operation as the only means of security? or are we to stand by, insensible, as it were, to the hazardous situation of our patient, and mute observers of his sufferings, without stretching forth a hand to his relief? when, by a few skilful strokes of the scalpel, we may not only give him a *chance* for his life, but if we are allowed to anticipate the result, from similar precedents, we will be enabled to avert the fatal event, and, subsequently, enjoy the pleasing reflection, that our duty has been faithfully discharged by a timely and unhesitating adoption of bold and judicious practice.

* See Introductory Lecture to a Course of Surg. Anat. and Operative Surgery, by D. L. Rogers, M.D.

ART. III. *A Case of Empyema successfully treated.* By A. S. SHELDON, of Chenango Forks, (Broome County) New-York.

THE following case of empyema, and the mode of treatment, with its success, may afford some valuable hints in regard to the treatment of *phthisis pulmonalis*. I have therefore concluded to communicate the same to you, and, if you please, you are at liberty to make what use of it you may think proper.

About the beginning of July, 1825,—— Herrington, æt. about twenty-three years, of sanguineous temperament and healthy constitution, while pitching hay, received a wound from one prong of a pitchfork. Three weeks subsequent to the accident I saw him, with Dr. Isaac Cushman and Dr. Smith. The fork had entered about four, or, perhaps, five inches from the scrobiculus cordis, in an oblique direction downward, and in the right side, and continued upward and backward, under the integuments, till it came in contact with the inferior edge of the sixth rib, four inches, perhaps, from the place of beginning, whence its course could be traced no further. The eschars were to be seen, where the skin had been punctured for emphysema, which supervened about the third day, with difficulty of breathing; the latter having been present from the beginning. On the sixth day, a discharge, of a serous nature, took place from the wound in considerable quantity, which relieved the dyspnœa in a measure. From this time there was continually a trifling discharge, until twenty-four hours previous to the time we saw him. He had been carried eight miles on a feather bed, in very pleasant weather, and slowly. The night after this ride he was seized with vomiting, when Dr. Cushman was called; who, two days after, desired me to see the patient with him. Since night before last the discharge from the wound, externally, had entirely ceased, he had distressing paroxysms of coughing, at which times he expectorated considerable quantities of pus; he could lie only on his right side, or back, with the head and chest considerably elevated. At 11 o'clock, A. M., he had a hectic flush on his cheeks; pulse very rapid and very irregular, appetite good.—Upon *strict trial and due examination*, at the distance of about two and a half inches backward from the extremity of the original wound, between the sixth and seventh ribs, it was discovered that a slightly painful sensation was produced by pressure. In this situation

the operation of *paracentesis* was performed, by Dr. Isaac Cushman, when about one pint of healthy pus was discharged, at the opening; a canula was introduced, and retained in its situation by adhesive plaster and bandages about the chest, and the pus, thereby, had free passage; the discharge continued to decrease daily, and by the assistance of bark, wine, &c. he has regained his health. From the operation he experienced immediate relief from his difficulty in respiration, nor did he have another paroxysm of coughing.

Although I do not conceive an abscess in the lungs, occasioned by the agency of the usual exciting causes of phthisis acting upon a scrofulous habit, which has previously been the cause of the formation of tubercles in the lungs, as likely to be relieved by this means as one caused by a simple lesion of these organs, by external causes, in an otherwise healthy subject; yet, where it is practicable to afford a free passage to pus, from the lungs, without subjecting the patient to the irritation necessary to excite expectoration, it must afford a better chance of overcoming, and the physician more hope in the good effects of medicine, in this obstinate, and, usually, fatal disease.

The operation for empyema is noticed by the oldest writers on medicine, and, as we are told, took its origin in accident. A person affected with an incurable ulcer in his lungs, determined to put an end to his life by exposing himself in battle; he received a wound in his side, which opened an abscess; and he, in consequence, recovered. With regard to the supposed effect of the case above related, in increasing our knowledge of curing phthisis, or any general disease, it is very improbable that any aid may be derived from it. Phthisis and dropsy of the lungs proceed from general causes; are laid in hereditary predisposition, which produces a deep seated affection of the general system, and local morbid alterations of the lungs, which render it quite improbable that they ever can be relieved by an operation entirely local in its effect. A case is related, by Moraud, in the Memoirs of the Royal Academy of Surgery, for the year 1752, which is quoted by Johnson, and is extremely interesting.

"An ecclesiastic, 22 years of age, of good constitution, was first affected with a fever and then again with measles. The course of the measles being interrupted, a violent fever ensued, with severe affection of the chest, ending in an œdematous swelling of the left side of the body, difficulty of breathing, and other unequivocal symptoms of hydro-thorax.

At this period, Moraud was called in, who gave it as his opinion, that there was a collection of water in the left side of the chest, and that nothing but a surgical operation would remove it. This was agreed to, and it was performed by thrusting an ordinary trocar through one of the intercostal spaces, when water rushed out in a full stream, and to the amount of five pints and better. That which came last had a purulent appearance. The patient was instantly relieved; but in the course of a week the bad symptoms again returned, and, in another week, it was necessary to have recourse to a similar operation, when five pints more of water were drawn off, mixed, towards the end, with purulent matter. After this operation, the urinary secretion augmented, the fever diminished, and gentle sweats came out on the surface. The disorder now took a different turn, 'as he insensibly fell into so dreadful a marasmus, that his life was once more despaired of.' A milk, and other nourishing diet, however, restored him to perfect health, in which he continued afterwards. A purulent discharge from the wound obtained for several months after the last operation."

It was, as the translator judiciously remarks, a case of inflammatory dropsy of the pleura, and, as he states, the operation will no doubt be useful in such cases.

EDITOR.

ART. IV. *Observations on the cure of Un-united Fractures, by the application of Caustics.* By JOHN RHEA BARTON, M.D. Surgeon of the Pennsylvania Hospital, and Philadelphia Alms House Infirmary.

THAT imperfection occasionally to be met with as consequent to the fracture of a bone, usually denominated *an artificial joint*, has, within the last three or four and twenty years, been regarded as more within the remediate powers of the surgeon, than it was anterior to that period; so many cases however, occur, which resist his judgment and skill, that cures must be sought for by remedies varying from those at present in use.

The only means resorted to in earlier times, were such as were calculated to correct any irregular condition of the system to which such a defect might be attributable, or to resort to the terrific and hazardous operation of rasping or sawing off the rounded extremities of the un-united fracture.

The former practice is such as would be adopted by every judicious surgeon, when he meets with a case which he thinks is influenced by any constitutional irregularity. Unfortunately, the cases arising from this cause, bear but a small proportion to those that seem to have occurred from the injudicious management of the fracture, or from mischief done to the bone during the curative process, or more frequently from some circumstance connected with the nature and extent of the original injury. When any of the latter causes, have given rise to an artificial joint, it may be considered as purely a local affection, and consequently requiring a corresponding plan of treatment. The operation just mentioned of cutting off the ends of the bone, has always been undertaken with reluctance, as well from the formidable character of it, as from its doubtful issue. That it has been performed with success in some cases, is a fact well attested; but that it is an extremely difficult operation for the surgeon, painful and cruel for the patient to endure, and at all times of questionable result, not merely as regards the limb, but as to life itself, is acknowledged by most of the distinguished modern authorities.

As a substitute for this mode of treatment, so objectionable in every respect, the introduction of a seton between the fractured extremities, was devised by Dr. Physic, as a mean of exciting and maintaining the degree of irritation essential to the ossifying process. Accordingly, in 1802, a case of artificial joint in the humerus occurred, in which the doctor applied his views to practice. The seton was introduced, and at the expiration of about twelve weeks the fracture became consolidated. The success in this case has led to its adoption in a number of others, in this country and abroad, with varied results. It has succeeded in un-united fractures of the humerus, tibia, femur, and lower jaw; and there are records likewise of its failure in many cases. I have known a fair trial given to the seton, in four cases, and had the misfortune to witness its failure three times out of the four.

Impressed with the belief, that the only cause of failure of the seton arises out of its inadequacy to excite and maintain for a sufficient time, that extensive degree of inflammation which the nature of certain cases requires, I have been induced to apply the caustic potash to the extremities of the bone, viewing it as a more powerful means of effecting the requisite irritation in the periosteum and vascular structure of the bone.

The first intimation we have of the practice of applying

escharotics in such cases, is given by Mr Charles White, of Manchester. This gentleman *once*, combined with the method originating with him (of sawing off the ends of the bone) the application of the *caustic muriate of antimony* to the inter-ligamentous structure and callous extremity of an old fracture of the tibia. A slight exfoliation took place, and the patient got well.

In 1805, Dr. Hartshorne, of this city, successfully applied the caustic alkali to the *integuments* over a fracture of the external condyle of the os femoris, un-united for four months. The seton here was inadmissable, from its interference with the capsular ligament of the joint. In 1811 the doctor again applied caustic potash to the integuments over an un-united fracture of the os humeri, below the insertion of the deltoid muscle. In this case the success was not quite so perfect, as there remained some obscure motion at the seat of fracture. The patient, however, declared himself capable of using the arm without inconvenience. I have not known of any other cases where it has been thus *superficially* applied.

The late Mr. Henry Cline succeeded in the cure of an artificial joint, by the more efficient method of applying the caustic to the ends of the bone. In April 1822, Mr. Henry Earle read a paper before the Medico-Chirurgical Society, wherein he details two cases of un-united fractures *unsuccessfully* treated, by the application of caustic alkali to the ends of the bone. In one case the seton also failed. Sir Astley Cooper has subsequently made a similar trial of caustic; the result I have not been able to ascertain. The case subjected to the caustic treatment by myself, was that of a gentleman of this city, with an artificial joint of the tibia, resulting from a compound fracture, so extensive as to jeopardize the life of the limb. My patient escaped the shock of the violent injury, and the circulation was carried on through the leg, though with such feebleness as to preclude that healthy action, so essential to the deposition of the ossific matter, where it was required. Several months elapsed without the slightest appearance of bony union, notwithstanding the utmost care to invigorate the system generally, as well as the limb itself. A state of quietude was persisted in; frictions with mild liniments alternating with cold affusions, were continued for months; the patient was permitted to get up and walk about with crutches, with injunctions to bear as much weight upon the limb as he could with safety. These, with other devices, were successively resorted to, until sixteen months had

already elapsed. I now resolved on attempting a more efficient course of treatment, and commenced by the application of the caustic potash to the integuments, covering the fracture. The eschar thus formed, in a reasonable time, came away; the caustic was again applied: the second slough extended to the periosteum, and the third application was made to the periosteum and space between the ends of the bone. At the fourth and last application, the caustic was liberally rubbed upon the fractured extremities of the tibia, and upon the inter-ligamentous structure; considerable inflammation ensued, exfoliation took place, and in about three months from that period, the bone became solid. This gentleman enthe most perfect use of his limb.

We have thus on record, the results of the caustic plan of treatment, by which it will be seen that it forms a valuable acquisition to the means employed for the cure of old fractures. I do not recommend it to the exclusion of other practice, because I believe the seton will in many cases succeed, and be a more judicious course of treatment than any other; and that the sawing off the ends of the bone may be advantageously performed in some cases, where milder means have been ineffectual; but it furnishes us with another expedient, of which we may on proper occasions avail ourselves. The only difficulty to be encountered in the use of the caustic, consists in the application of it to the bone without destroying too much of surrounding soft parts, and involving large blood-vessels and nerves: this danger may be obviated by making a free incision between the muscles down to the bone on the side of the limb most remote from important parts. Should there, however, be found any difficulty in controlling the action of the alkaline caustic from its dissolving and flowing on the adjacent parts, the *actual cautery* could be substituted with advantage.

The following histories of ingenious inventions will be read with great interest, by the profession, as the productions of our fellow citizen, Dr. Rousseau, who, in the year 1800, and since, has done so much to disprove, on the basis of experiment, the supposed existence of this function in the skin: His inaugural Essay prepared the way for Drs. Klapp, Mussy, and others. The delay of our author, with regard to the communication of the results of his ingenuity, is to be attributed to a desire to perfect them by repeated trials; we are encouraged to hope therefore that he will soon enable us to lay before the profession, the improvements which his long experience has tested, and thus, by future communications, give his usefulness a more extended range.

ART. V. *An Improved Mode of Treatment for the fracture of the Patella.* By J. C. ROUSSEAU, M. D. Philadelphia.

THE reunion of fractured bones, becomes always hazardous, in proportion to the difficulty of replacing and keeping them in their natural position, until the process of nature has produced a sufficient agglutination between the divided portions, to enable them to perform their duties.

This is particularly the case in fractures of the patella; where, not only the surgeon, but nature itself, seems to have a difficult task to perform; for, the ossification between the fragments of this bone is yet very questionable; and, from what I have seen, and been able to learn, a cartilaginous or ligamentous substance, in the majority, if not in all cases, forms the junction.

Hence, undoubtedly, proceeds the so frequent recurrence of this injury, when the patient is not extremely cautious to shun every chance of accident, for a great length of time, after all appearances of firmness and solidity have taken place.

This non-ossification has been, by some, attributed to the want of proper apposition of the fragments; and, that it has often been the case, I am willing to admit; but having, in several instances, seen the fragments in juxta-position during the whole time of the confinement, and as long as the apparatus was kept on, yet those fragments receding, by degrees, from their former contact, as soon as the patient began to walk, I am induced to believe that some other cause must be looked for, to account for this irregularity.

It is not improbable, and I have sufficient cause to suppose that the fracture, and the subsequent non-ossification of this bone, are the result of an idiopathic defect of constitution: and, for the following reasons:

1. The occurrence of the same casualty on both the patellas of the same individual, at different periods.

2. The small degree of force that generally operates the fracture with some individuals, whereas a centuple degree of power can not produce the same effect on others.

3. The inconsiderable degree of injury produced, in numerous instances, on the integuments, which, if the force were applied outwardly, would invariably suffer contusion, abrasion, and oftentimes laceration.

From these considerations, the division of the patella should, in my opinion, rather be considered as a case of laceration, resulting from the contraction of the muscles inserted into it, than ranged under the fractures of the bones.

As it can not be supposed that the surgeon has in his power to favour the reunion of the bones, otherwise than by keeping them in their proper place, and in close contact, our attention is particularly demanded in this respect.

Of the several bandages and splints that we now possess, I do not intend to say much; every experienced surgeon being competent to judge of their merit; but simply to offer a new mode of dressing, to enable every one to make a proper choice. Its simplicity, a desirable thing in surgery, appears to me a powerful recommendation in its favour. The surgeon's duty frequently calling him where not a small difficulty is encountered in procuring the materials of the wanted apparatus, for the injury he has to repair.

The following description, with a look at the plate, will, it is expected, be sufficient to give a competent knowledge of the few parts composing the apparatus, and of the manner of applying them properly.

The superior fragment of the patella having been brought into contiguity with the lower portion always remaining in situ, a small cushion, made of several doubles of muslin or linen, or properly stuffed and covered, if convenient, is applied at the upper edge of the bone, and kept firmly fixed there, by means of a belt of about two inches in breadth, with a buckle attached to it, for the convenience of keeping it in a proper degree of tightness, to prevent the slipping of the cushion over the patella. To this belt is fastened, on each side, about two inches below its upper middle part, a strap of sufficient length to reach, and admit of its being tied under, the sole of the foot. One stocking, or two if thought requisite, having been passed over the leg, and a shoe put on the foot of the lame side, the leg stretched in a right line with the thigh, and forming an obtuse angle with the body, the straps are drawn to and fastened under the sole of the foot, with sufficient force to keep the upper fragment in close contact with the lower one.

A paste-board properly shaped to encompass the limb, about nine inches above and below the knee, in which must be cut two small holes, corresponding to each side of the calf of the leg, for the purpose of giving a passage to the side straps running down to the foot, having previously been soaked in some alcoholic mixture until it has become sufficiently soft and pliable, is then applied to the limb and shaped to its contours by means of a roller bandage, after the side straps have been passed through the openings left in it and refastened under the sole of the shoe. The cap of the knee

is to be left uncovered, by the paste-board, and a second cushion or compress, applied upon the patella, and firmly kept there by means of a small roller going over the paste-board.

The dressings are now complete; and, if the limb be kept at rest for a time sufficient to effectuate the dryness of the paste-board, it will form a casement equal in strength to, and easier than any splint that might be applied, on account of its bearing equally on every part of the limb; a quality that few splints, ever so well covered and padded, can ever possess.

The advantages obtained by this apparatus are ostensible.

1. The diseased part of the limb can, at all times of the cure, be exposed to view, without the necessity of removing any part of the dressings but the compress on the top of the patella.

2. The belt and cushion, keeping the fragments in apposition, can be, likewise, watched and tightened at pleasure, without disturbing any thing.

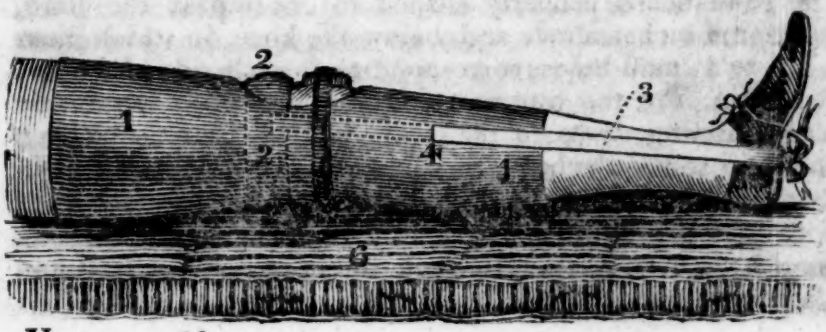
3. No uneasiness is created, and the swelling not increased by the belt on account of the fleshy nature of the part of the limb it embraces, and the deep situation of the blood-vessels encompassed by it.

4. The patient can be moved with safety from place to place, without fear of disturbing the dressings.

5. The materials composing the whole apparatus can easily be procured, at a small expense; a matter, in many instances, of some consideration.

I have not yet been sensible of any defects attending this mode of dressing; but if any be found, a remedy can be pointed out, and if I have promoted some improvement, my labour will not be left without reward.

For the better understanding of the whole apparatus the plate may be consulted. The paste-board, covering the dressing, is, there, supposed transparent, to give a full view of the *tout ensemble*.



ART. VI. *A Case of Destruction of the Epiglottis, in which life was prolonged for several months.* By DR. J. C. ROUSSEAU, of Philadelphia.

—— Miller, in Cable Lane, in the year 1802, was afflicted with disease of the larynx, attended with ulceration, which had nearly destroyed the epiglottis, as appeared on examination after death, by Drs. Hewson and Rousseau: the impossibility of swallowing liquids exposed him to suffocation. His solid food was made into a ball, in order to prevent its descent into the glottis; and thus he protracted his miserable existence. His drink was supplied by a catheter, introduced into the stomach; through which was injected water, broth, alcohol, and other liquids: as this process was troublesome, and required the attendance of the physician, he was necessarily left to the care of his wife. By the advice of Dr. Rousseau, the intestine of a chicken was directed to be swallowed by the patient, one end of which was fastened to one of his teeth, by a ligature, and the other end terminated in the stomach; through which his wife injected broth, and other fluid articles of nutriment, and supported him for several months: the intestine was changed as often as necessary.

ART. VII. *An Improved mode of Operating for the Piles.* By J. C. ROUSSEAU, M. D. Member of several learned societies of Europe and America. Read before the Medical Society of Philadelphia, 1825.

IN this Essay I propose to offer some improvements on the methods adopted for the removal of the piles, by a surgical operation; the success of which has been invariable, and warranted by an experience of upwards of twenty years.

When the piles have, from long duration, as well as from a multiplicity of causes, become permanent, and have given rise to fungous excrescences around the anus, not unfrequently attended with ulcerations, hemorrhage, and fistulas, no other alternative is left, to relieve the sufferer, than the entire removal of the diseased tumours.

Early in my practice, I was so fortunate as to meet with several opportunities that gave me the strongest reason to

deprecate the use of the knife, in a number of diseases, but more particularly in the extirpation of the piles. Hemorrhages, ulcerations, loss of the substance so necessary around the anus, and the destruction, or disability, of the sphincter ani, were so frequently observed, that I formed the firm resolution to avoid the same evils. Indeed, I was at once satisfied that, in a majority of cases, the knife, on account of the certainty of profuse and unmanageable hemorrhage, was entirely out of the question.

The ligature of the tumours was not without inconvenience; but it appeared to me, that it was defective, not in itself, but in the mode of applying it.

1. The bulk generally enclosed in the ligature was too great to produce a prompt sloughing; and the force required to tighten it sufficiently, was productive of the most excruciating pain.

2. In many cases it was impossible to draw the ligature tight enough to occasion the entire death of the parts enclosed in it, without running the risk of cutting partly through the sides of the tumour, contiguous to the ligature; hence, constant pain, irritation, inflammation of the living parts, and fever, were the consequences of the operation. Not unfrequently a second ligature, over the first, became indispensable, before the sloughing was obtained; the parts first detached receded from it, the ulceration was extensive, and the cure protracted to a great length. Yet these evils were trifling, compared to the destruction of the anus, or its contraction to so small a degree as to require dilatation, or to leave the patient, for the remainder of his days, with a disease as bad, if not worse, than the former.

3. In cases attended with prolapsus of the gut, the common mode of operating by the ligature, is impracticable.

To remedy these defects, did not appear a very difficult task. From minor cases, to more important ones, I soon satisfied myself that the pain experienced from two or three small ligatures, was, by no means, equal to that given by a single large one; and, consequently, was induced to multiply them as much as the bulk of the tumour required.

The only difficulty to be surmounted, was to pass the threads of the ligatures in such a way, as to be certain of leaving nothing untied; and to repeat the passage of the needle as seldom as possible, to save pain to the patient; which was obtained by the mode we shall presently explain.

It will be found, as I have long been convinced, that the success and the promptitude of the cure, depend *cætera pari-*

bus, almost entirely upon the smallness of the parts enclosed in the ligatures, and the certainty of having left nothing out of them.

The mode I have adopted and successfully pursued for many years, possesses all the advantages aimed at. It differs from others in the following respects:

1. I multiply the ligatures, and enclose in each of them as little as possible of the substance to be removed.

2. I pass two threads with one thrust of the needle, and place the ligatures as close as possible to the sound parts. By this method, one of the threads is used for one ligature and the other for the next, and not the minutest part can possibly be left out untied; the chain of ligatures resembling the double stich of the saddler made with two needles.

To perform this operation with ease, and prevent confusion and mistakes, I arm the needle with threads of two different colours. It is then passed through from the side of the anus to the outside of the tumor, and again from this side to the former, and so on, alternately, until the whole bulk has been stiched all round: observing, between each passage of the needle to keep a distance of about one third of an inch, or a little more, according to circumstances, on the outside, and much less, relatively, on the inside, and leaving behind, after every pull of the needle, a loop of about three or four inches in length.

This part of the operation over, all the loops are to be partly divided as follows. Cut on the outside, all the threads of one colour at the middle of the loops, and all the threads of the other colour, next to the anus, in the same manner. You now have, evidently, a number of isolated ligatures, ready to be pulled and tied closely into a knot. This can be easily and promptly done, and the smaller will have been left the portions of the tumour between each ligature, the less force will be required, and consequently, the less pain given to the patient.

All the ligatures being well secured by a double knot, the ends may be clipped off: the patient put to bed, a gentle anodine given, and a bread and milk poultice put on the parts. It is necessary to observe that, if the bulk of the tumour operated on be large, it would be well, as the whole of the tumour has now become insensible, to cut away a portion of it, to prevent the fetor that must eventually result from the decaying substance, particularly during the warm season; and add, to every poultice, some powdered charcoal. Care,

however, must be taken, not to cut too close to the ligatures, lest they should slip off, and give rise to some troublesome hemorrhage.

In the course of seven to ten days, all the ligatures have dropped; the dressings become very simple, and are to be managed *pro re nata.*

It may not be improper to state, that I have never seen more, and frequently less, than a teaspoon-ful of blood lost during the operation, from the largest tumours; and so little fever supervened, that I do not recollect of a single case in which I have been under the necessity of resorting to blood-letting, or recommending a severe diet. Indeed, in the majority of cases, confinement to bed was not rigidly enforced.

With a view of elucidating and giving weight to my remarks, I shall give the outlines of a few cases, selected out of many, which had the same favourable results.

Case 1. John Suter, a gentleman about thirty years of age, assistant in the post-office of Philadelphia, had suffered from the piles for a number of years: having tried, in vain, all the remedies which had been proposed, and being informed that I had cured several by a surgical operation, he applied to me for relief, determined to undergo any trial, rather than to lead a life to which death was preferable.

I assured him that the operation had never been attended with any danger, and required an examination of his case. I found him afflicted with a large mass of fungous excrescences, to the extent of about three inches in diameter, around the anus; a prolapsus of the gut, and two fistulas. This case appeared desperate, but seeing him under the firm resolution of undergoing the operation, I did not hesitate to grant his wishes.

The 22d of March, 1822, being agreed upon, I desired him to take a cathartic on the preceding day, and to abstain from much food. Accompanied by my two sons, then students of medicine, I fixed him, his belly upon the side of the bed, and his feet upon the floor, as represented in the figure No. 1.* Directed him to bear down, as in the action of forcing a stool, until I could not see any more of the gut coming down.

The internal orifices of the fistulas could then be plainly seen.

I then passed and repassed the needle armed with the double threads as before described, including in the stiches all the prolapsed part of the gut, until I had gone half round.

* Simply one half of the tumour is delineated here, for the sake of perspicuity.

I then divided the loops as represented in the figure No. 2 drew tight and secured the ligatures by a double knot. I continued the same on the other side of the tumour and completed the operation.*

Having removed part of the tumour with the scissors, a bread and milk poultice was applied, forty drops of laudanum administered, and the patient placed in bed and directed to lay on one side or the other.

A smarting pain was felt for a couple of hours.

At 9 o'clock P. M. I visited the patient; feels easier, no appearance of fever.

23. No fever, very little pain: moderate diet.

24. No fever, a throbbing pain about the anus.

25. Pulse a little raised, throbbing pain not increased: gentle cathartic.

26. Stools did not give much pain.

27. Symptoms very favourable, no fever: indulged a little more food.

28. to April 3. nothing unfavourable, had a stool every day.

4. All the ligatures have come off, the wounds look well, dressed with simple cerate, ablution after every evacuation.

8. Healing kindly.

10. Goes out.

17. Entirely well. This patient has enjoyed, and is now enjoying, a perfect state of health.

Case 2. Mrs. Akin, an old lady, above sixty, who had suffered, for upwards of twenty years, not only from the piles, but from a multiplicity of remedies used in her case, much reduced and declining fast, seeing no hopes of cure, was persuaded to submit to the operation.

She was treated much in the same way as in the former case, and in three weeks was enabled to return to her avocations, her health improved rapidly; she recovered flesh and strength, and I have known her for fifteen years after, enjoying perfect health.

Case 3. Mr. Cowperthwait a shoemaker by trade, much reduced by repeated hemorrhages from large tumours encircling the anus, had been reduced to a desperate condition, and abandoned as incurable by Dr. Shippen, his physician.

He was extremely emaciated, and unable to leave his bed,

* I prefer dividing this operation, when the tumour is large and encircles the whole of the anus, in two distinct parts, on account of the multiplicity and contiguity of the ligatures on the inside; by this method, a great deal of confusion may be avoided, and much time saved.

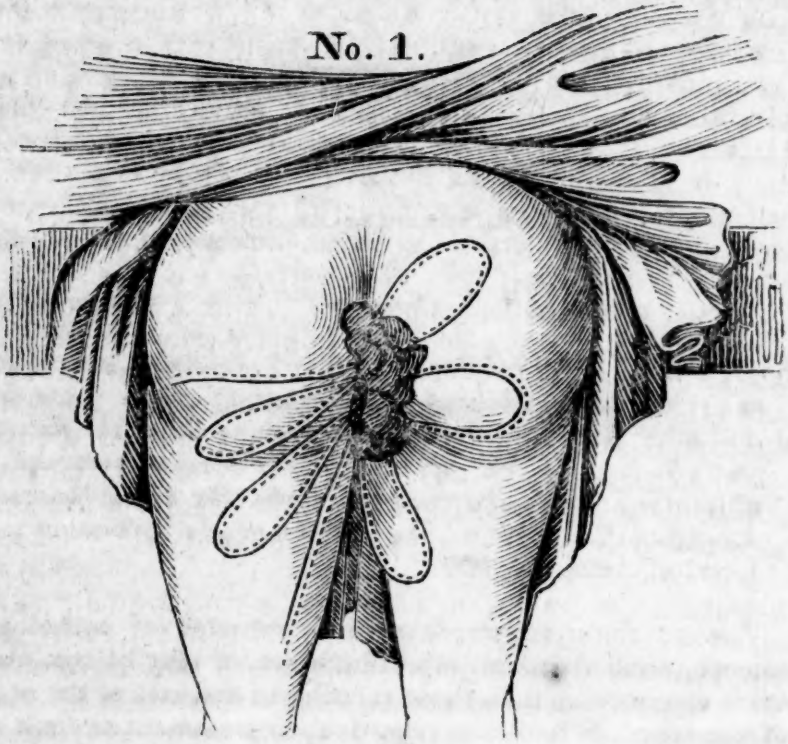
when he requested my attendance. I saw plainly, after a few days of attention, that no alternative was left to save his life, if that were possible, but the operation, and he cheerfully gave his consent. Assisted by Dr. Hewson I operated on him at different periods, and had the pleasure to see him free from disease, return to his trade and enjoy at last a healthy and comfortable life for a great number of years.

His treatment presenting nothing different from the mode pursued in other cases, I think it useless to enter into any particulars concerning it, except mentioning that a generous diet was recommended from the beginning to the last.

Case 4. Andrew Nebinger, a bleeder, in Front near Catharine, had suffered by the piles for seventeen years; he was unable to attend to any business: and has been cured by this mode, and has enjoyed perfect health since the operation in Jan. 1818.

Many more cases might be referred to, but these will, I hope, be sufficient to show, that by this mode, extremely safe and simple, the cure is rapid and complete—that the fears generally entertained, on the supposition that the piles are a salutary outlet, indispensable to the constitution, and that other diseases and infirmities would be incurred by their removal, are entirely erroneous and without foundation.

No. 1.



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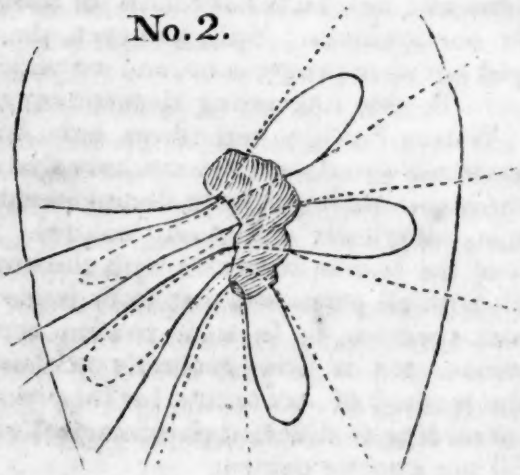

REVIEWS.

Quidquid venerit obviam, loquamur
Morosa sine cogitatione.—*Martial.*

ART. VIII. *Practical Remarks upon Indigestion, particularly as connected with bilious and nervous affections of the head and other parts; including observations upon the disorders and diseases of the stomach, and inferior parts of the alimentary canal; illustrated by cases.* BY JOHN HOWSHIP, Assistant Surgeon to the St. George's Infirmary; &c. London, 1825, pp. 200.

AMONG the many modern improvements of pathological science, none claim our attention more, or may be considered more meritorious than those relating to diseases of the organs of digestion. Whether as regards their treatment or their connection with other diseases, observation has been awakened, and new views and new facts have been for many years accumulating in our archives. Still, however, the subject may be considered but as in progression, and we undoubtedly have much to learn in this interesting department of pathology. Abernethy, Wilson Phillips, and others, have done much, but we have much more to do, ere we can have that large class of diseases which owe their origin to derangement of the automatic system, completely under our control. The relation of all parts of the human structure with the stomach, and of the stomach with all parts, whether in their derangements of structure and function, or in their healthy action, has long been notorious, and is now generally acknowledged; and although the method of accounting for them may be various, and differ according to different physiological views, still that relation will not now be denied.

From the respectable character of Mr. Howship, the author of this and several other productions, we anticipated much interesting information, and some new light on a sub-

ject that has occupied our attention very considerably, from the prevalence in this country of the diseases incident to indigestion and dyspepsia; but, we regret to say, we have been much disappointed. It is by no means what the title purports to be, a Treatise on Indigestion. We will, however, give a sketch of its contents, and subjoin our remarks.

The first fifty pages are devoted to diseases of the throat and œsophagus; this part we conceive should have occupied the last pages of the book, instead of being placed in front of a work, on Indigestion. Some interesting facts and good practical observations are to be found in this part of the work, but we can observe little very new, or that has not been suggested before. The diseases of the parts treated of, are relaxed uvula, inflammation, and tumour of the tonsils, ulceration and abscess of the throat, ulcerated larynx and œsophagus, palsy of the latter and polypus, pouch, spasm, spasmodic stricture, permanent stricture, stricture from fungus hematodes, and from scirrhus. After the pathology of these are severally treated, their methodus medendi is necessarily taken up. Eleven cases illustrative of these complaints are then given.

Relaxed uvula, considered as a source of irritation, producing cough, sick stomach, dyspeptic affections, with loss of flesh and strength, is thought to be too often overlooked, and it is recommended to inspect the throat in such cases.

Relaxation of the mucous membrane of the alimentary canal, is supposed to give rise to polypus in the nose and fauces, but no reason or authority is assigned for it; prolapsus of the rectum is without doubt caused by it.

Cynanche tonsillaris is described as correctly as in most books of practice, with no material variation. A specimen of sarcomatous tumour which originated in the fauces, is mentioned as being in the collection at St. Bartholomew's Hospital, which, projecting into the pharynx, impeded respiration, and on autopsic examination, was found to have projected against the basis cranii, which was removed, and impunging on the dura mater and brain, many ounces of which it is thought must have been absorbed, although that is not asserted, without injury to the mental faculties, which is thought curious, but is not near so much so as the preservation of the functions supplied with nervous power from the base of the brain; the growth of the tumour, however, must have been very slow and gradual. It gives an indirect support to the phrenologists, who do not locate any faculty or organ in that direction. It is stated that there is a preparation in Mr.

Heaviside's museum, which establishes the disputed occurrence of small pox eruption on the internal mucous membranes; that is, of the œsophagus. A dissection of his own is also given to the same effect, in the pharynx.

Ulceration and abscess of the throat is mentioned as liable to occur, the former from putrid fever, the latter from inflammation; also ulceration of the larynx and œsophagus, destroying the epiglottis, extending from the œsophagus into the lungs, producing death from inanition, sometimes from spasmodic stricture; dissections are given illustrative of these diseases, and two interesting cases are added.

"*August* 7, 1822. I was requested by Dr. James to examine the body of a fine boy, aged eight years, who (*July* 30) had at school swallowed a double pointed bit of slate pencil, an inch long, with a string tied round the middle. The boy, frightened, could not get it up, and several other boys in fear of the master, pulled successively with force, and at last with great pain succeeded in extricating it.

"From the time of the accident, he could only swallow liquids. A medical gentleman who first saw him, sent some castor oil, which he said, he hoped would soon set all right; and did not repeat his visit. The child attempted to swallow the castor oil, but with extreme pain and retching it was rejected. The parents under this direction considered little more was required than a little time, and accordingly supported him on slops and milk; the poor child however complained of constant and great pain in the neck, although he was extremely patient.

"*August* 2. He had some, and the following day more, difficulty in breathing; with a croupy noise, and much anxiety.

"*August* 5. The mother called on Dr. James, who the next morning visited him. At this time extreme anxiety was depicted in the countenance, a rapid small pulse, pain and evident fulness about the neck, with excessive aggravation of suffering in every motion of the head or neck. He could now swallow nothing. Leeches, and a blister, were ordered; and applied.

"*August* 7. Early this morning he died; having all along complained of great pain not only about the fore part, but also at the back of the neck, and between the shoulders, which parts were so tender, that he at last entreated not to be moved at all.

"On inspection after death, the whole neck felt evidently full, and thrown forward, as if by a soft tumour. I dissected cautiously through the lateral parts of the neck, down to the

transverse processes of the cervical vertebræ, soon opened into an abscess seated in the cellular membrane behind the œsophagus, filled with tenacious greenish pus, occupying the whole breadth of the line of vertebræ, and extending from the top of the pharynx downwards as low as the upper part of the sternum. The œsophagus did not appear to have been lacerated, or torn through in any part.

"The trachea and larynx were thickly covered internally by a secretion in colour and consistence very like pus; with some mucous tenacity, but without any degree whatever of discoloration, or redness, of the inner membrane. The rima glottidis was, from tumefaction, nearly closed.*

"*August* 19. Mentioning the above circumstances to Sir Astley Cooper at Mr. Heaviside's, he said he had lately seen a lady, who swallowing a part of the breast bone of a pigeon, had grazed her throat, which was for a week very sore, and then got worse, and with difficulty of breathing and greater difficulty in swallowing, within another week proved fatal. A large abscess was in this case formed between the pharynx and upper cervical vertebra. He was just after this requested to look at a tutor, who had difficulty in breathing and swallowing; alive to the thing, he looked into the pharynx attentively, and touching it, felt a fluctuation, punctured it, let out matter, enlarged the opening, and the man got perfectly well."

"*December* 4, 1823. In conjunction with Dr. Hooper, I was consulted, by Mr. G. a middle aged gentleman, who had come up to town for advice. He stated that four years since, much exposed to fogs and damp air, he had taken a most severe cold, that settled with fever about his throat and neck. This affection for a time neglected, he had ever since had hoarseness, a sense of soreness in the course of the trachea, and a constant spitting of frothy mucus. In addition to the above, a progressive difficulty in swallowing had taken place, almost from the commencement of his complaints, which, with increasing emaciation and weakness, constituted the leading features of his disease, for which, without the least relief, he had already been under the care of various physicians and surgeons, of character. On looking attentively into the throat, nothing particular was perceived; but the depression of the tongue, which always excited irritation,

*The diseased parts are preserved in Mr. Heaviside's Museum.

was followed by a copious rejection of glairy and ropy mucus.

"The opinion at once formed by Dr. Hooper and myself was, that ulceration existed within or about the larynx, from which there was scarcely a possible chance of eventual recovery; the family, however, notwithstanding this unfavouable opinion, entreated that for their future comfort, the doctor would continue his attendance, which he promised to do. The pulse was at 90, and rather hard, skin hot, and tongue white. Proper medicines directed for the relief of his constitutional symptoms, it was agreed that a bougie should be occasionally passed. A blister was directed to the throat.

"*December* 12. An elastic bougie, three-eighths of an inch in diameter, had been several times passed, much to his relief, through the contraction, which was opposite the lower end of the pharynx. The instrument exciting much irritation, could only be borne two minutes. His facility of swallowing liquids was much improved by the operation, and the power of swallowing solids partly recovered.

"*December* 22. An attack of acute pain in the side had required appropriate medicines, and the application of a blister. The introduction of the bougie was continued. The stricture only admitted the bougie after pressing it lightly for a minute; it then passed through, and was retained for nearly two minutes more, and withdrawn. This operation was always followed by more or less cough, with rejection of mucus, after which he soon recovered. He said he was now able to swallow with tolerable ease, but for the sense of soreness and rawness at the top of the larynx, over which he felt every thing must pass; the distress from which, took away his resolution to eat, though he now could swallow. Tongue white; pulse 94.

"*December* 30. The irritation and distress in swallowing so great, that he could scarcely ever take any food, even in a fluid form. He was persuaded he should die for want of support. He was directed to have a glyster of strong beef tea injected night and morning, and one of warm milk in the middle of the day. He said afterwards, he thought the beef tea answered best, or that at least it was not attended with the rumbling and wind that followed using the milk. It was recommended that of the beef tea a much larger quantity (several pints) should be very gradually and slowly injected; hoping it might thus find its way further up in the bowels, and stand a better chance of proving useful.

"*January* 14, 1824. The inhaling the fumes of heated tar,

with the internal use of bals. copaib. and opiates, had decidedly alleviated the previously intolerable pain in deglutition, and spasm of the glottis. These symptoms were so much relieved, that he was again enabled to take solid and fluid nutriment in sufficient quantity by the mouth, and the injections were consequently laid aside. The character of the expectoration was not only changed from a dense, thick, yellow matter, to a light, thin, frothy, white mucus, but its quantity was lessened to one-third of what it was before. An eruption, however, appearing upon the skin, with considerable oppression in breathing, required the laying aside the bals. copaibæ, when the symptoms presently returned to their former state. Pulse 120, with a hectic flush on the face.

"*January* 18. Early this morning, he died; exhausted by continued irritation and pain. Upon opening the cavity of the abdomen, the liver was sound, but a small calculus was found in the gall-bladder. The stomach was healthy; and the small intestines were in a perfectly natural state. The head of the colon and cœcum, and the closed extremity of the appendix cœci vermiformis, felt altered by disease. The former of these portions of bowels felt soft, thickened, and pulpy; the latter as if thickened and indurated at its extreme point. When these parts were laid open, the appearances seemed those of ulceration; but when carefully injected, these appearances were no longer equivocal. I found the cœcum in its opening into the colon, ulcerated all round; the cellular surface of the ulcer deep, brown, and sloughy. Round the opening into the appendix cœci was another ulcerated ring; then the fine inner membrane lining the appendix was seen finely and clearly injected; till within two-thirds of an inch of its apex, a large ulcer was manifest, passing quite round its cavity, and extending nearly to the end of the canal. External to the cavity, at the end, was now seen, quite distinct from the fine injected membrane, the section of a small white soft tumour, deposited in the cellular membrane, between the peritoneal and internal coats of the tube. The contrast was beautiful, the natural structure well injected, that of the tumour not injected at all.

"The transverse arch of the colon, for about eight inches, the sigmoid flexure for about four inches, and the lower part of the rectum for the space of seven inches were diminished in size by a uniform contraction, so as to prevent the passage of contents, forming a compact cord, most probably from disuse, and the want of accustomed distention by solid matters.

"On removing, for examination, the parts forming the

principal seat of disease, the epiglottis was found nearly destroyed by ulceration. The membrane covering the arytenoid cartilages, and lining the upper part of the cavity of the larynx, was very much thickened from disease; it had an irritable vascular appearance, excreting a matter, and exhibiting characters of ulceration, though modified by the peculiar texture of the surface.

"The thyroid cartilage was so firmly ossified, that two knives were broken in the attempt to cut through it; and in order to inspect the cavity of the larynx, it was found necessary to divide it with a saw.

"Within the œsophagus, the contracted part of the canal, just opposite the lower part of the larynx, was sufficiently obvious; as, however, part of the contraction had arisen from spasm, the diameter of the tube appeared less diminished than it had been during life."

Palsy of the œsophagus occurs from debility arising from fever, or is a consequence of a preceding paralytic complaint, and constantly endangers the life of the patient from suffocation. Gout has produced it, and Dr. Baillie is quoted as giving instances of this inability in swallowing, and death from ossification of the cartilages of the larynx.

A case of polypus producing obstruction in the œsophagus is then given from Dr. Monro's Morbid Anatomy, and another of tumours, by the same author. Pouch in the œsophagus, is stated, from Dr. Baillie to have been produced by a cherry stone lodging there for three days. These are all uncommon occurrences, which may, however, happen to practitioners when least aware of them, and lead them astray; it is therefore useful to put them on their guard against them.

Spasm and stricture constitutes the most interesting subjects of this part; constrictions from the former are very liable to occur, especially in hysterical females, producing one of the most distressing symptoms of that complaint, though not frequently fatal. A case is given which was attended with excessive flatulence, in which the spasm obstructing the discharge of wind, was productive of immense distress, which its relaxation and consequent discharge of flatus soon relieved.

It is produced by cold air, by a thunder-storm, by gout, a dissection of a case of which is mentioned. Wherever spasm alone exists, it is not discoverable after death, though inflammation is sometimes produced, and permanent stricture is frequently a consequence. A case is given, in which thick-

ening and scirrhus of the coats of the stomach was found after death.

Frequent contraction, not always relaxing, becomes permanent stricture, which Dr. Monro has also known to arise from an attack of sore throat. This goes on to increase, ulceration often occurring, sometimes above, sometimes below the stricture, with discharge of pus. In some cases a pouch is formed by the lodgement of articles of food; in one case it was large enough to contain a pint. The state of the ulceration can seldom be fully determined during life, therefore, says Mr. Howship, "our decisions, like those of the law, should give the unfortunate sufferer the benefit of every doubt. It betrays, in my opinion, a most unpardonable want of feeling, to decide hastily and unfavourably upon circumstances, the absolute existence of which we cannot prove, though we may reasonably suspect." p. 29. Obstruction of the œsophagus has also been produced by the extension of disease from another part; an abscess of the right lung, comprehending that tube and trachea. In a case of fungus hematodes, the disease appeared to have extended by fistula, through the œsophagus into the bronchia.

True cancer is often productive of stricture, mostly distinguished by its symptoms. "Where the constriction is situated at the upper extremity of the œsophagus, Mr. Heaviside considers a very bad symptom to be a complaint of occasional pain extending from the stricture towards the ears; as such pains invariably mark a cancerous tendency in the disease. Frequent pains extending laterally to the shoulders, where the seat of the disease is lower down in the œsophagus, must be considered as of a similar character with those shooting upwards towards the ears, and therefore highly unfavourable. But, of all diagnostic symptoms, sensations of shooting, heat, and burning in the part itself, more especially if the patient emaciates rapidly, seems to afford the most decisive evidence of the existence of scirrhus, or cancer. Although, however, this sense of heat, if present, may clear up doubt, its absence must not remove suspicion; for of the two cases of this disease selected from those I have seen, in one there was a constant sense of intense burning heat in the part, compared to that of a red-hot poker boring through the back (Case 11.); in the other no feeling whatever, from first to last, of local pain was perceived, much less of those peculiar sensations generally attendant upon this disease; although after death, it was found to possess every appearance of tuberculated scirrhus. (Case 10.)."

It is remarked that "the peculiar characters that distinguish scirrhus, are very rarely developed in early life;" an exception is however, given, and reference is made to Dr. Baillie's valuable engravings, and to Sempronius (1613) for instances of scirrhous stricture; one from his own observation is given, in which it was confined to the cardiac orifice; likewise, though not exactly to the purpose, a case of mal-conformation in an infant, where every thing was rejected, and death took place after three days; the upper inch of the œsophagus "terminated in a *cul de sac*, and was discontinuous with the cardiac portion of the stomach, where the closed orifice formed a small button."

To the treatment of these diseases twenty-five pages are devoted. After the ineffectual use of astringents in relaxed uvula, its removal is to be had recourse to; excision is objected to on account of hemorrhage, which, we believe, may be guarded against, by the immediate application of caustic; the ligature is recommended, by applying a noose by means of a steel instrument with a ring at the extremity, held in the left hand, for the reception of one end of the string that forms the noose, and used to tighten it. In inflammation of the tonsils, antiphlogistics, astringents, and blistering, are recommended, with scarifications; and here we observe an inconsistency—speaking of the use of a puncture to discharge the pus, he says: "If the puncture be premature, the result will be unsatisfactory; the full establishment of suppuration being impeded, not prevented;" soon after, speaking of high inflammation, it is observed, "here I have repeatedly found the advantage of deep and free scarification as a means of diminishing tumour and relieving distress." A premature puncture is but scarification, and must produce proportional relief. We would observe that that dreaded monster, typhus, is too frequently looked for and feared here, as in many other cases, and a consequent injurious treatment pursued; we have been called in consultation where this has been the case, and where a total change of treatment, to depletion, has been productive of instantaneous relief, where inflammation and ulceration had been extending fast. The name of typhus and typhoid, we have no doubt, has been productive of immense evil in the medicine of this country, perhaps from our too readily adopting apprehensions which may have more foundation beyond the water, than here.

In chronic enlargement of the tonsils, removal is considered the most effectual remedy, and the ligature here is undoubtedly very rightly preferred to the knife, as hemorrhage is more

to be feared than from the uvula. A small whip cord has been used by Mr. Howship, with a noose formed with a running knot, which was pushed along by an iron instrument with a ring at its end, the same, we presume, as that proposed by him, and which we imagine does not differ from that used by Fabricius Hildanus and Scultetus; neither can we perceive that it possesses any advantage over the canula, and certainly is not to be preferred to the thick iron wire as used by Dr. Physick, and we presume, equally applicable to extirpation of the tonsil. Some benefit arises from the mode recommended by Mr. Howship, from getting rid of the canula, the ligature being attached to the cheek by sticking plaster. Mr. Warner is mentioned as having seen a tonsil so enlarged as to be incapable of being removed by the knife, occupying the whole roof of the mouth, and producing pain in the ear, and deafness. It was destroyed by slices with a curved scalpel, the hemorrhage being checked in the intervals by cold vinegar and water. Tumours in the pharynx are recommended to the surgeon as suspicious objects, but no method of performing the operation is even alluded to. Where abscess is forming in or near the throat or œsophagus, early attention becomes of great consequence to diminish the effect by depletion; its rupture may prove fatal—it is apt to take place into the tube. Where ulceration is accompanied by spasm and stricture, it is to be treated accordingly; the distress produced by the irritation of food, is but little under control, and in this, as well as in other symptoms, anodyne medicines are most to be relied on. Paralysis of the œsophagus is said sometimes to be effectually relieved by electricity; volatile alkali is found useful, and depletion is recommended in some cases. "In several instances, where the secretions from the kidneys and bladder were morbidly affected by paralytic complaints, I have, however, gained more ground by endeavouring to relieve the functions of the brain, by leeching and blistering the head, than by attempting to restore nervous power by the use of stimulating medicines; and on the same principle, should other plans fail, I should be much disposed to try the effect of depletion, as a means of restoring the impaired functions of the brain and nerves to their healthy condition." Obstructions in the œsophagus are treated in the usual way, and nothing of importance introduced; where the difficulty arises from ossification of the larynx, of course nothing can be done; where there is polypus, an emetic is proper to bring it into view, and if practicable, a ligature is advised, and

the wire and ring again; there is fashion in medicine as in every thing else—the judicious surgeon must rely on his ingenuity for those modes of relief required by each case. Dr. Monro effected a partial removal in one instance.

To ascertain the existence of pouch, a sound with a ball one fourth of an inch in diameter, must be passed, as in seeking for a false passage in the urethra, until the ball is caught in the obstruction, and the situation ascertained; its depth may be known by its passing over its edges. If within reach, its edge may be slit through with scissors, and thus prevented from retaining the food swallowed; this may be done with a sound and ball, having a probe pointed blade added, shutting into the ball, and having a strong spring and wire handle, the spring closing the blade when it has reached the bottom of the pouch, which it does alone, by being opened at the edge. The success of the operation may be determined by a bougie; and the effect of bleeding must be guarded against.

In transitory spasm, antispasmodics are recommended, as in hysteria. In a case of spasmodic stricture, salivation succeeded where a great number of other medicines failed. The disposition to this is to be removed by improving the general health by the usual means; where it becomes permanent, the use of the bougie, as usually laid down, is recommended, and no new information is imparted. The use of the wax bougie as recommended by Dorsey, we believe is preferable to the gum elastic. We think the following advice cannot be too often repeated.

"The importance of maintaining regular action of the bowels, is not less in these, than in most other complaints, to which the human body is liable; neither should the practitioner rest satisfied with knowing the bowels have acted, for the still more important question yet remains—as to how they have acted. Observation furnishes many instances, in which sensible persons have been lulled into false security, by the bowels appearing to render their contents freely, when in fact the most obnoxious matters have been nevertheless retained from day to day, and from week to week; and this while the patient had regular evacuations every day. These truths, however, I have so lately endeavoured to demonstrate, as to render it unnecessary to repeat what is there said upon the subject."* Where the obstruction is complete, nutritious injections are advised to procrastinate life. In fungus hematodes, and scirrhus, these means, with the addition of

* See Pract. Obs. on the Diseases of the Lower Bowels, &c.

anodynes, must be relied on—which, also, may be administered per anum.

Part the second is upon indigestion: this is preceded by some remarks on digestion, tracing that process through its various modifications, from the lowest grade of animal life, in which the animal consists almost entirely of stomach, as in the hydatid and polypus, up to man, where the most perfect organization exists; but as these are unimportant in a practical point of view, we pass them over. In speaking of the contraction sometimes seen in the human stomach, and ascribed by some to disease, and considered by others as a healthy state of the organ, he mentions having seen it. "In *post mortem* examinations, I have in several instances found the healthy stomach moderately distended with air, and have particularly remarked this peculiar condition. The cardiac portion inflated to about six, the pyloric to about five inches, and the central contraction scarcely to one inch in diameter. The contracted part, in three instances, exactly resembled in texture, the other parts of the organ, except in being rather thicker. Upon handling and disturbing the viscus, and especially on slightly pressing the inflated portions, the contraction was gradually overcome, and in a short time had so perfectly vanished, that its previous seat could no longer be determined."

The definition given of digestion by Dr. Hooper, is adopted, and the circumstances necessary to effect it, by which that process is simply confined to chymifaction. This is certainly a material error, since chylifaction may be considered as part of the process. That the circumstances of heat, mixture with the saliva, the gastric juice, and peristaltic motion of the stomach, are necessary to chymifaction, we are willing to allow; but that pressure from the action of the abdominal muscles and diaphragm is so, as stated by Dr. Hooper, is by no means evident, neither is it established as a physiological fact. The stomach, generally considered as the principal organ in this process, performs but a preparatory function. The change produced in the food in this cavity, is material and great; almost all substances are there reduced into a homogeneous mass, not only softened and dissolved, and completely changed in its properties, but it is a process neither chemical nor mechanical, as stated by Mr. Howship, neither produced by concoction, fermentation, putrefaction, trituration, or maceration, but a vital process, *sui generis*. We would define digestion therefore, as that function by which the substances taken for food, and submitted to the action of a peculiar system of organs, are changed in their

properties, and thereby a new compound formed, fit for the purposes of nourishment and growth.

But it is the disturbance of that part of the process which is confined to the stomach, of which Mr. Howship here treats. That from sympathy with other parts of the system is first noticed. 1st. With the brain, as in sea-sickness, which we know is sometimes extremely distressing, and productive of most unpleasant effects, but as soon relieved by removal from its cause; violence, productive of injury to the brain, is also alluded to, as a cause interfering with the functions of the stomach, together with sanguineous apoplexy; but he says, "In serous effusion upon the brain, sickness at stomach is not, I believe, so frequent a symptom; if that variety of the complaint, induced by drinking, be excepted." p. 59. Now we think hydrocephalus is certainly an example. Chronic inflammation of the membranes, with suppuration, is allowed to be productive of suspension of the functions, but not of sickness. We have seen acute inflammation in infants, produce vomiting unconquerable.

In acute disease of the chest, the stomach is said not readily to sympathise: in affections of the abdominal viscera, it inflames from the presence of biliary calculi, but not from diseases of the liver. In affections of the spleen, and pain and spasm of the kidneys and ureters, we know it sensibly to be disturbed. But nearly all parts affect, and are affected by the stomach, in its healthy and diseased action. Powerful complaints of the head, owing their origin to those of the stomach, are noticed; indeed they are the objects of every practitioner's observation, as seen in swimming and giddiness, oppressed brain, sick head-ache, &c., which are relieved by correcting the state of this organ. Palpitation of the heart, and asthmatic affections of the chest, are well known to result, and indeed are prominent symptoms of derangement of the digestive functions, and calculous affections arise from the same cause.

That "deficient power of digestion occasionally appears to arise from a vitiated state of the gastric juice, which is prone to convert whatever is taken into a viscid mucus or acid matter," cannot be admitted. How a vitiated gastric liquor can be supposed thus to convert the food is beyond our comprehension. We have always had the idea, that mucus was a secreted fluid, and the acid ejected from the stomach, the result of fermentation when the healthy process of chymifaction was interrupted, and the substances followed the course they would out of the stomach, under similar cir-

cumstances of heat and moisture. We know, indeed, that it has been asserted that acids, even the muriatic, were secreted from the stomach, but the assertion is supported by so little evidence, that our credence cannot be given to it. The suggestion immediately after the above, that the origin of scrofula may be attributed to this conversion, is as void of foundation. We have seldom seen scrofula unattended with good digestion, and frequently have known cases of that kind, where acidity of stomach prevails, unattended by any scrofulous appearance, though lasting many years, and have no doubt that this remark will be supported by the observation of others. "It is of importance to know, Mr. Howship continues, that this state of stomach will keep the constitutional health in a very deranged state for an indefinite length of time." This undoubtedly is true, but that it is always owing to vitiated secretion, is doubtful. The succus gastricus may, perhaps, be vitiated at times; it may be deficient in quantity also, or by overburthening the organ with an unreasonable quantity of food, or of such a quality as requires a more than ordinary power to reduce it; the process which ought to go on in the stomach, may not take place, and consequent disorder be produced by that process taking place, which would occur out of the body, and the result prove a source of irritation; or if no change should take place, the substance itself may prove a cause of disturbance. The difference in these circumstances will produce a variety in the symptoms, and gives rise to the differences between dyspepsia and indigestion, and their varieties, which terms, however, Mr. Howship confounds, and uses confusedly through his work; his book is entitled a work on Indigestion; but we meet with dyspepsia oftener in the body of the work, and no distinction seems to be made between them.

An instance of the vitiated state of stomach mentioned above, is given from sympathy with the gravid uterus, but no effectual remedy is found for it. A case of the same, from external violence to the pit of the stomach, is noticed from Dr. W. Hunter.

The disorders from intemperance are next pointed out: these, we are obliged to say, are but too common in our country, the effects of the inordinate use of ardent spirits. It falls peculiarly to the lot of physicians to observe, and to regret, but not often to remedy or reform this habit, for the most part, the *ne plus ultra* of cure, while the continuance of it is too often encouraged by some members of the profession, by

suggesting the idea of danger from its abandonment. We will, as concisely as possible, enumerate these disorders.

"The earliest ill consequence of continued excess, is a declension of appetite, which goes on to a total want, not only of desire of food, but of power to retain it;" so that nothing but strong stimulus will remain. If the food be not rejected, the healthy process does not take place, but the change it is liable to out of the stomach, goes on, and in passing the bowels, where fermentation continuing, much air is eliminated; hence the vomiting, acidity of stomach, diarrhœa, depressed secretion, flatulency and ulceration of the intestinal canal of drunkards. Disease of liver follows, which "has generally had the appearance of an intestinal deposite into the substance of the gland, somewhat resembling a scrofulous or cheesy matter," forming numerous small tubercles, with contraction and greater firmness, or a few large ones, with increase of the substance, forming with "fasciculated and ligamentous fibres," a cancerous appearance. The effects on the brain are of a peculiar kind, producing "excessive excitement of the nervous powers, delirium of a peculiar character, and oppressed brain from a peculiar cause;" dissection discovering, "that instead of the proper constituents of healthy blood, the vessels, large and small, especially those within the head, contain a fluid, which, in the transparent veins of the brain, appears like water scarcely tinged, and in the arteries, is pale and thin, from the great deficiency in the quality and quantity of the crassamentum." Four cases are given illustrative of these effects on the brain.

"Through the kind attention of Dr. Yeats, I was desired to examine the body of Captain G. aged 42; a very heavy and corpulent person. This gentleman, who had been many years abroad, principally in the West Indies, was said to have been through life of an obstinate and self-willed temper, and addicted to drinking; by which his intellects were impaired, and latterly his appetite and health; his memory and other faculties, destroyed. A few days before he died, he was stated to have vehemently abused his servant man for breaking a pane of glass, which so far from being broken, had not been injured.

"On examination, the tunica arachnoides was found separated from the pia mater, by serous effusion upon the upper, but not the lower, surfaces of the cerebrum. The arachnoide membrane had also numerous small pearly opake spots upon those parts, raised by the effusion of serum. About ℥iij. of a similar fluid was contained in the ventricles. The veins

upon the pia mater were loaded with the same peculiarly pale and attenuated fluid, scarcely resembling blood, noticed in my other examinations of this disease."

The stomach is sometimes more violently affected by a kind of chronic inflammation, producing burning and irritability, with effusion of lymph and pus between its coats, of which the following is an instance.

"In the presence of Dr. Ager, I opened the body. The stomach scarcely at all discoloured externally, appeared and felt thicker than natural. Removed from the body, the stomach was laid open, along the lesser curvature, where although no part felt scirrhous, the thickening was most remarkable. In doing this, the knife was covered with pus, and it appeared that purulent matter, coagulable lymph, and serous fluid had been universally effused into the cellular tissue, between the villous and muscular coats of this organ. In some parts the effused matter was pus alone, in others it appeared to be almost pure coagulable lymph, tinged yellow, but with scarcely a trace of pus, while here and there minute vessels were seen shooting into the lymph. Behind the large longitudinal rugæ of the stomach, the appearance was that of a relaxed and transparent œdema, rendering each fold of the inner membrane large and full.

"The average thickness of the coats of the stomach was one-fourth of an inch; on its external surface the only morbid appearance observed, was a few small inflammatory specks.

"The rest of the abominal viscera were sound."

Gastritis is next treated of, but without throwing any additional light on the subject.

Spasm of the stomach, an affection so alarming and excessively agonizing, is then noticed; and is considered as connected with costiveness and dyspepsia always. This, however, is not quite correct; as we have known it independent of either; for it sometimes occurs in patients subject to convulsive attacks. An instance is given of its being produced in a woman by eating pickled onions and bread made of chesnuts, causing death in three hours; the curd of milk has been known to occasion it; also, mental affections; in fine, any irritation liable to produce spasm in the muscular fibres. Biliary calculi and metastasis of gout are mentioned too, as exciting causes; an instance is given of the latter, in which the pain removed from the feet suddenly to the calves of the legs, thence in half a minute to the thighs, thence to the bowels as quickly, and lastly, to the stomach; here it was relieved by vomiting a pint and a half of a green corrosive

aqueous fluid; whether this may be considered in the light of cause or effect, must be a matter of conjecture; most probably it was neither, but only a concomitant circumstance—sometimes an accompanying yellow tinge of the skin, and light coloured stools, indicate the liver to be disordered. The pain experienced, is that of the stomach being pressed to the back violently, which is increased by the retention of food: a hot skin, foul tongue, and quick pulse, frequently attend.

Affections of the liver are next treated of, either as a cause or an attendant circumstance.

On hepatitis we have nothing remarkable: caution is strongly recommended in opening tumours supposed to be abscess, as the gall-bladder, when enlarged and adherent from obstruction, has been opened on this supposition, and in some cases proved fatal. Some instances of this mistake are taken from M. Petit—the bile may flow into the cavity of the peritoneum, or the opening may become fistulous. A throbbing pain, with shivering, followed by heat and moist skin, is considered as indicative of suppuration; the gall-bladder, too, presents under the rectus muscle, in abscess of any part of the liver. The gall-bladder has been opened, and large biliary calculus extracted, but it was by mistake, and we are not informed with what success. On the subject of biliary calculi and their symptoms, we have little else than compilation; cases are given from Petit, Leaule, and Gooch, and symptoms from Dr. Heberden. A number of instances are also given, of large biliary calculi being discharged, by ulceration, into the bowels, taken from Mr. Thomas, Mr. Brayne, Dr. Hooper, and Mr. Heaviside's museum: the largest one in the latter weighed 1320 grains. The ulceration sometimes occurs in the immediate vicinity of the stomach, and causes much irritation to that organ, and has been known to open directly into it, thus discharging the contents of the gall-bladder into the organ directly; Dr. Baillie mentions an instance of this kind where there was a short canal—the opening has sometimes been nearly closed. Very large calculi have, however, passed through the natural passage.

Affection of the liver is often a concomitant and effect of dyspepsia, we know; that it is ever productive of that complaint, we are not aware. A temporary fit of indigestion may perhaps sometimes be produced by a disorder of the biliary organ, but we cannot bring ourselves to believe that the liver has such influence in the system as to produce dyspepsia in all its various forms and complicated connexions.

An instance is given of scirrhous affection of the omentum

mechanically interfering with the stomach, and contracting the lower orifice. (Case 26.) Also, cases of enlarged spleen are given, but that they occasioned the dyspepsia with which they are attended, or that the affection of the spleen was produced by the dyspepsia, is not apparent. Mr. Howship remarks, as others have, that the affections of this organ were always attended with the depressing passions, a circumstance never yet accounted for in our physiology, unless mechanical pressure explains it; the same remark, however, will apply to the dyspeptic affections of the stomach, as also to disorder of the bowels and liver.

A case of polypus of the stomach is mentioned from Dr. Breschet, and two from Dr. Monro, but no diagnostic symptoms are pointed out as indicative of it; and although ulceration of the mucous membrane of the stomach is not uncommon, it does not appear that there is any satisfactory evidence of its existence before death. The causes may vary much. We have a number of instances of that painful and intractable disease, scirrhus of the stomach. Tumour is said to be a distinguishing characteristic, though not constant, and vomiting a diagnostic symptom; severe dyspeptic symptoms occasionally attend. An extensive instance of scirrhous disease is mentioned, in which the omentum was indurated and adherent to the intestines, liver, and spleen, the lesser curvature of the stomach adhered to the diaphragm by a scirrhosity; the left lung also adhered to the diaphragm, forming an ulcerated cavity, which communicated through the diaphragm with the stomach, by a small opening; part of the œsophagus was scirrhous—quoted from Dr. Taylor. A case is given from Mr. A. Burns, where a tumour existed during life, which included induration of the stomach and colon, by which they communicated with each other—there was here no vomiting. "It is probable little or nothing passed by the pylorus, as the contents of the stomach would find so much more ready a passage by the ulcerated opening into the great intestine. The effect was the extreme debility of inanition; for, as Mr. Burns observes, little nutrient matter could be absorbed from the lower part of the colon and rectum. Showing, also, how extensively the stomach may be disorganized without vomiting; it leaves us to doubt if that action in scirrhous pylorus be any thing more than the mere effect of obstruction to the passage of the food by the natural course." (p. 104.)

Cancerous ulceration generally proves fatal by the disorganization it produces; the contents of the stomach are

sometimes poured out into the cavity of the abdomen, producing peritonitis; sometimes hemorrhage occurs and terminates the patient quickly; this has taken place from the veins, which were found by Dr. Monro, in one case, enlarged; capillary hemorrhage is supposed to occur occasionally, from debility, giving rise to black vomit; "instead of separating the fluid which it is their office to secrete into the cavity of the stomach, the exhalant arteries permit the blood to pass unaltered;" this of course is but a matter of opinion.

"One of the most powerful inducements to diligence in studying the various characters of disease, must be the reflection, that when we are once aware of having to contend with a disease which may, by heedlessness, be driven forward, but can frequently, by prudent attention, be soothed and lulled into comparative repose, we shall no longer be in danger of mistaking our object; but, seeing it clearly, shall not fail to keep in view that line of treatment which will generally confer much comfort and relief, even where it may not be possible to bring about a favourable event."

The injury to the stomach from poisons is not included in the work; of that produced by the accident of taking boiling water, there is one in which recovery took place by the use of aperients and blisters. In a fatal case, part of the stomach was lined by a new membrane of coagulable lymph, formed by inflammation. In another, there was gangrene, and the surface nearly black.

We have thus gone through with the description of diseases of the stomach, and have found that scarcely any thing is said on indigestion, of which the work purports to treat. We shall now take up the treatment, which is awkwardly arranged by itself.

For sea-sickness, rest, stimulants, and salt water, are recommended; the good effects of a powerful impression on the mind is also mentioned. Where the disturbance of the stomach is secondary, and sympathetic of disorder in other parts, it of course becomes necessary to attend to the original complaint. In dyspepsia from debility of stomach, particular attention is recommended to the bowels, and a tonic and aperient course to be used. In hydrocephalus, "the first object, after fairly and sufficiently lancing the gums, should be to clear the stomach and bowels by proper medicines; the second, to keep them so, for the prevention of unhealthy accumulation." For this purpose, mercurial medicines are strongly advised, and the regulation of the hepatic function by

exciting salivation. Where irregular action of the heart exists, it is considered as an additional reason to use aperients.

The production of calculous complaints, is attributed altogether to the generation of acid matters; whereas we know that an alkali is not unfrequently the cause, and cured by the use of acids; we knew lately a patient who had been troubled many years with gravel, cured by the use of the expressed juice of the apple. But on this subject, Mr. Howship more particularly refers to his other work. In the treatment of dyspepsia and sick head-ache, the plan recommended scarcely differs from that of Wilson Phillips, except that he objects to administering an emetic, from fear of "fulness in the blood-vessels of the head," having, as he says, "seen many ill consequences from the administration of emetics; consequences we seldom meet with in this country, though emetics are very abundantly administered. In that state of stomach to which scrofula is ascribed from the generation of acid in that cavity, the use of the compound decoction of sarsaparilla, with alkalies and aperient medicines, is recommended; the uneasiness and uncomfortable sensations often referred to the right side, as arising from duodenal obstruction, must be removed by aperients. In a case of an alarming want of retention in the state of pregnancy, although much acid matter was rejected, the juice of a lemon was allowed, from its being craved, and removed the complaint. In the form of the disease from intemperance, "a most important question appears to be, whether it is proper or safe to lay aside at once, that stimulus which has excited and kept up the disturbance. I am aware that some physicians, for whose talents I have the greatest respect, qualify this prohibition; but reference to the examples now given, (cases 14 and 17) will suffice to prove the perfect safety of adopting a more decided rule; and from what I have seen in the practice of others, I believe recovery is more rapid under a complete, than under a partial abstinence from fermented"—and, we believe, it may be added, from spirituous liquors. Where excessive excitement exists, bark and opium are praised; but we should object to the use of tinctures, on the plea of breaking fully and thoroughly off from ardent spirits in all their forms; for we certainly would not wish to give them undiluted. As soon as the power of retention is obtained for a little warm milk or beef tea, the opium is to be discontinued, but the tonics are to be persevered in, with the addition of aperients. Where there is evidence of the liver being affected, mercury must then

be used. If inflammation of the stomach exist, active antiphlogistic treatment is recommended, as large bleedings, both general and local, blisters, fomentations, and the hot bath, and cathartics, as soon as they can be retained with mucilaginous drinks.

Dyspepsia, with violent pain from gout, is recommended to be treated by antispasmodics; they are undoubtedly serious affections. Where spasm arises from irritating contents, the stomach and bowels are to be evacuated.

In disease and disturbance of the hepatic organ, the usual course adopted by most practitioners is recommended—depletion, where inflammation is prominent, followed by aperients and mercury. "Should the tumour present the purulent contents of an abscess, it will be invariably safe to make an opening into it;" the plan advised for this purpose, is to cut through the integuments with a scalpel, and then introduce a trocar and canula; thus preventing the flow of bile, should the contents prove to be such, into the abdomen. We may then excite inflammation and adhesion of the gall bladder to the abdominal parietes.

Where biliary calculi exist, aperients, followed by blue pill and opium, three or four times a day, with the warm bath and anodyne fomentations, beside emetics, are doubtingly recommended. Where there is a tumid spleen with dyspepsia, after the loss of blood and the use of purgatives with diaphoretics and blisters, have reduced the inflammation, the tonic and aperient plan is to be persevered in, with a strict diet.

Where ulceration of the stomach exists, it is thought that little can be done but to avoid irritation by the use of mild diet. When scirrhosity is suspected, in addition, opiates combined with hyoscyamus or belladonna, are advised, but from an alterative course of mercury, we are dissuaded; for though Mr. Howship says he has seen much of its use, he has not found it beneficial in a single instance, but rather thinks it injures, by establishing an additional irritation. Where hemorrhage supervenes, the remedies for that affection must be used, (astringents and venesection,) and reference is again made to his work on the bowels. The treatment recommended for the swallowing of hot water, appears to be the same as that advised for inflammation of the stomach.

Upon the whole, as a practical manual or hand book in diseases of the stomach and œsophagus, it may be of some utility; as a scientific work much cannot be said in its favour.

Though purporting to be a work on indigestion the term dyspepsia is used throughout, which is thus confounded with the former; for no where do we find precisely described the symptoms of dyspepsia, as this complaint does not appear to be perfectly understood by the writer. Instances are given, as dyspepsia from enlarged spleen, but in none does there appear, from the description, to be any indication of dyspepsia. The work might rather have been entitled an essay on the anomalous diseases of the stomach and œsophagus; which are mostly organic and the effect of functional disorder in other parts.

The arrangement of the work is extremely inconvenient. After treating of the pathology of a part, that of other parts is gone through with, and we then come back to it, in the treatment; this we conceive to be very faulty, and the want of a table of contents makes it more so. This is no small fault to find in any work, but here it is one of extreme inconvenience, and deserves much reprehension, for although an index be added, it would not answer the purpose.

Some valuable facts are, however, to be found in the book, and interesting cases of extensive disease. In the first part, on the diseases connected with deglutition, we have something more comprehensive than usual. As this operation is somewhat complex, requiring the various actions of the tongue, the palate, the pharynx, and œsophagus, the diseases of these parts, though not so frequent as might be expected from their frequent use, are complicated in their nature, and troublesome as well as difficult to treat. The works on this subject in English are not numerous, Sir E. Home's we believe is the best, as far as it goes; but the diseases, when chronic, and attended with organic alterations, are most frequently fatal in their termination, from default of nutrition, thus adding the pains of starvation to those of the malady. These considerations should be an inducement to receive with attention any work possessing information on diseases of these parts, though not in the precise form, or so complete, as we could wish.

But on the subject included in the second part of the work, on digestion, indigestion, and dyspepsia, we have not of ate been wanting in writings, of very different characters to be sure, but on the whole possessing a large share of information; those of Abernethy and Phillips have drawn the attention of medical men to complaints of the digestive organs, formerly overlooked, and have occasioned a more close scrutiny of their symptoms.

In using the terms dyspepsia and indigestion as synonymous, our author has the authority of Cullen and the Encyclopedia Methodique, and, perhaps, of other authors, but as now understood and taught by medical writers, a difference is acknowledged between the two, and consequently a distinction, in a treatise upon them, should be made.

Some authors regard them as different degrees of the same disease. Wilson Phillips considers indigestion to include dyspepsia, which, he says, expresses "a disease much less varied and of much less extent" than indigestion. Mons. Bouchet of Lyons, in a dissertation published at Paris, 1808, designates, under the general term of dyspepsia, those complaints which take place during an imperfect chymifaction. Indigestion should be considered as a depraved state of the functions of digestion generally. In the consequences arising from a difficult performance of that process which takes place in the stomach, we have dyspepsia.

On the various organic derangements of the parts concerned in digestion, a variety of scattered information exists, which Mr. Howship has attempted to embody into form, and to which he has made some additions; that he has not succeeded is very evident, but the attempt is not without merit. In the section on the effects of intemperance, some useful observations are made and some information given; but on this subject, which offers so wide a field for collecting instruction, especially to those gentlemen in public institutions, our science is very deficient; and it is rather surprising that in this country, where the effects of the immoderate use of ardent spirits are so generally conspicuous in the diseases of our hospitals and alms houses as well as elsewhere, that these effects are not more particularly pointed out by some medical writer.

In the numerous cases of different diseases collected by Mr. Howship he has shown much industry, as well as a *practical* regard for the true interests of medicine.

ART. IX. *The Lectures of Sir Astley Cooper, Bart. F. R. S. Surgeon to the King, &c. &c., on the Principles and Practice of Surgery, with additional notes and cases.* By FREDERICK TYRREL, ESQ., Surgeon to St. Thomas' Hospital, &c., vols. I. and II. 8vo. London, 1824.

THESE volumes are the commencement of a series which are at present publishing, and expected to be shortly completed, in London. That the profession might rely upon their correctness and authenticity, the manuscript was sent to Sir Astley, with the request that he would peruse it; which he accordingly did, and returned it to the editor with a note, in which he states that it contains a "faithful account" of the principles and practice of surgery, he has been long in the habit of teaching.

Sir Astley Cooper having been a public teacher of Surgery in London for more than thirty years, and having enjoyed a most extensive practice, both public and private, has already contributed greatly by his works, to the advancement of surgical science, and gained for himself a name and reputation which seldom fall to the lot of men in our profession. As he is about to resign his situation as a public teacher, the work under review is presented, and we doubt not from its real value, it will be received by the profession with no inconsiderable degree of interest.

It will be recollected that these lectures were delivered before a class of students, consequently much that the practitioner is already acquainted with is contained in them; as might be expected, however, they also contain much valuable practical information, and this we shall endeavour to present to our readers as fully as possible.

The first volume contains twelve lectures, the first of which is on the subject of irritation; by it we are taught the immediate and remote effects of injuries; how nature restores them on the one hand; and on the other, how apparently trifling accidents prove ultimately destructive.

Sir Astley is an advocate of the doctrine of sympathy. The real nature of sympathy is yet unknown, but we are acquainted with many of its effects, it is natural as exemplified in the alterations which take place in the breasts during gestation; sneezing is a sympathetic action between the nose, velum palati, and the abdominal muscles, instituted to remove causes of irritation from the nose. "But sympathetic effects also follow injuries and diseases, and become the causes of restoration on the one hand, or of destruction

on the other; and this state of the body is called irritation," which may be defined to be "an altered action excited in the body by an unnatural impression."

"Diseased sensation" only, is sometimes produced by irritation; thus we have a sympathetic pain in the knee and foot from diseased hip; a person with stone in the bladder, feels acute pain at the extremity of the penis; pain is experienced between the shoulders from a diseased condition of the liver. But by irritation, not only diseased sensations but morbid actions are excited in other parts, which are near and intimately connected, or in distant parts;" thus inflammation of the testicle, from irritation on the urethra; swellings in the breast consequent on a morbid change in the functions of the uterus; "retention of urine, I have known more than once occur after the operation for popliteal aneurism." No organ is more frequently affected by irritation than the stomach; in injuries of the brain, one of the first and most constant symptoms is vomiting; so also when the testicles are injured; or from a gall-stone passing the biliary duct: injury to the iris, and "an obstuse pain in almost any part of the body will occasion sickness."

"Irritation is generally communicated through the medium of the nerves, of which there are two systems;" first, those of sensation and volition, composed of the brain and spinal marrow; second, the great nerve of organic life, the grand sympathetic. The *course* of irritation varies; in some instances, it proceeds from the irritated part to the sentient extremity of the nerve; examples, pain in the knee from disease of the hips; pain in the little finger, when the ulnar nerve is struck at the elbow. In other cases its course is from the affected part to the origin of the nerve; thus, pain in the loins is consequent on diseased testicle. "Occasionally the sympathetic communication is through the brain," as exemplified by the case of a lady who suffered severely from a diseased tooth, she appeared also to be afflicted with hemiplegia; the tooth was extracted, and "in a short time the paralytic affection entirely subsided."

"Irritation is local or general; sometimes it is local only; thus, a decayed tooth will produce an abscess, and the matter escape by forming an opening through the cheek: this ulcer will be very difficult to heal, if the tooth remain; but extract it and the disease will quickly disappear, the cause of irritation being removed." Several cases are related by way of illustration, and which show the necessity of seeking care-

fully for the causes of irritation, as their removal is often sufficient to effect a cure, and always to afford relief.

"A lady was for a long period afflicted with a fungoid granulation, which protruded through an ulcerated opening in the cheek: she tried for several months every remedy that was recommended to destroy the fungus, but without producing the desired effect; a tooth, nearly opposite the opening, being occasionally painful, she was advised to have it extracted; this was done, and there was no longer a difficulty in curing the fungoid growth; for it was absorbed rapidly, the most simple applications only being used."

The "*general effects*" which are produced by irritation, are exemplified by the symptoms excited in dentition, "a paralytic state of some part of the body is not an unusual consequence." *Symptoms* of *constitutional irritation.*—A person receives a compound fracture of one or both bones of the leg: constitutional irritation soon commences; he first complains of pain in the loins; it extends in the course of the spinal marrow to the brain; he becomes restless; countenance expresses anxiety; tongue at first covered with a *whitish* fur, as the irritation increases, it becomes *yellow*, and in the aggravated stage it has a dark *brown* coating; loss of appetite, nausea, and vomiting; bile is secreted in very small quantity, so that the motions are white; the bowels are constipated, urine of a deep colour, and in small quantity; the skin is hot and dry. As these symptoms arise, the pulse quickens, becomes hard, irregular, and ultimately intermittent; respiration is quicker than natural and finally hurried and laborious; subsultus tendinum is produced; the patient sinks into a low muttering delirium; the abdomen swells; vomiting and purging often both occur, hiccough comes on, and the patient, "absolutely worn out by irritation, expires."

The degree of constitutional irritation from an injury, will depend on various circumstances, viz., the importance of the part; the nature and extent of the injury; the difficulty of restoring parts, as wounds of ligaments and tendons, parts possessing but little vital power, as in wounds of joints; the state of the constitution, which varies at different periods of life, is modified by the patient's habits, mode of living, and climate. "In infancy the irritability is excessive, and the system is easily excited to action: after the period of two years, the irritability is considerable, but the powers of restoration great. In middle age the irritability is less, and the restorative power still considerable: in age the irritability is much diminished, but the powers of restoration are also."

Excessive irritation often follows operations on very young subjects, our author states that he has "known children, after having undergone the operation of lithotomy at a very early period, die of convulsions."

Persons who are deprived of their natural rest, and take little food, suffer more from injuries, than those who sleep their due proportion; and the temperate man often suffers but little from an injury, which will produce most distressing constitutional symptoms in an intemperate person. A man had a small splinter of wood forced under the thumb nail on a Saturday; at the time he did not regard it, but the same night awoke in great pain and applied a poultice, which afforded no relief; on Sunday he became worse; Tuesday, hand much swollen, and pain extended up the arm; on Thursday Sir Astley saw him, and found that matter was formed in the hand; an opening was made with a lancet, and a considerable quantity of pus was discharged; the patient appeared much relieved "but upon hearing a noise as I was about to quit the room, I looked round: by a convulsive effort, the man had raised himself in bed, but immediately fell back and expired."

Violent constitutional symptoms occasionally result from slight local injury. "Dr. Ludlow, of Calne, pricked his hand with a thorn, in shooting, and died of tetanus in a few days." Many similar examples might be adduced.

An instance opposite to those just mentioned is furnished to show how great an injury may be sustained without producing any violent constitutional irritation. "The same person may at one period suffer but little from a wound, which at another time may give rise to fatal consequences;" thus, students who come from the country, on their arrival in autumn, have but little constitutional irritation; but in the spring, after having spent a considerable portion of their time in the dissecting room, and in the wards of a hospital, constitutional irritation is easily excited. "It is on this account that punctured wounds inflicted in the dissecting room, often produce such distressing effects; though it may, in some instances, arise from the absorption of morbid matter, which usually produces the most aggravated form of constitutional irritation. That these effects "depend more frequently on the state of the constitution than on the absorption of a morbid poison, is evident from their rare occurrence in the early part of the season, although perhaps more wounds are inflicted on account of the gentlemen not being so expert in the use of their instruments;" and also from the fact, that

"of several gentlemen occupied in dissecting the same subject, two or more may receive wounds but only one suffer from constitutional irritation; or they may be affected in different degrees. Those who advocate the opinion of the absorption of morbid matter as the cause of constitutional irritation, recommend the employment of escharotics; on the contrary, those who consider it as arising from a previously deranged state of the constitution, condemn them as hurtful, "by increasing the local affection."

Injuries producing fatal consequences destroy life in three different modes. 1st, When slight, by keeping up a continued constitutional irritation, they gradually wear out the system. This constitutes hectic fever, and exhibits symptoms somewhat different, as night sweats, &c. 2dly, When more severe, they destroy by occasioning excess of action. 3dly, The most severe, by shock to the nervous system, cause death without reaction. Our author states that he has "known a limb amputated for compound fracture, above the knee, and the patient die in four hours after, without any reaction; the body was covered with a cold perspiration, pulse scarcely perceptible."

On examination, *post mortem*, of those who die from irritation little is found to explain the cause of death.—"In children who die from scalds there is more blood than usual in the vessels of the pia mater, and a greater determination of blood to the spinal marrow. In children dying from the irritation of teething, there is an effusion of from two to five ounces of water in the brain. In an adult dying from irritation, we have several times seen patches of cartilage and bone upon the pia mater of the spinal marrow."

Treatment.—When irritation arises from a local cause, we must direct our remedies to, and if possible, at once remove it; if, on the contrary, local disease is aggravated by a deranged state of constitution, then the remedies must be in great part constitutional. There are two means of reducing irritation. 1st, By restoring the secretions, "and this is best effected by administering mercurials to act on the liver, aperients on the intestines, diuretics on the kidneys, and antimonials on the skin." 2d, By allaying the excitement of the nervous system; this is best effected by opium, or a combination of calomel, antimony, and opium, "to act on the skin or liver, as well as the nervous system." Saline medicines promote the secretions—liq. ammon. acetatis with tinct. opii. "The alkalies, as potash and soda, diminish the irritable actions of organs, as is seen in irritable bladder."

"The abstraction of blood lessens the momentum of the circulation, and prevents the danger of congestion in any of the vital organs; but it must be taken away with the greatest possible care, not to diminish too much the powers of the constitution." A man was taken to Guy's Hospital with concussion of the brain, the dresser bled him frequently and in large quantities: in ten days the man died. On examination after death, a slight laceration of the brain was discovered, but no attempt at restoration; "the continued abstraction of blood had deprived nature of her restorative powers." "In compound fractures it is extremely dangerous to bleed largely."

"If an important disease exist, nature will not always have power to perform the necessary duty of restoration." A man was admitted into St. Thomas' Hospital for a simple fracture of the os humeri; the fracture did not unite: on the twenty-ninth day the man died suddenly. Upon dissection an aneurism was found in his aorta, which had burst: very little, if any change had taken place in the fractured part.

When there is chronic irritation, we must endeavour to restore healthy action by *slowly* acting on the secretions, the blue pill or calomel, followed by an aperient, are the best remedies under these circumstances. "*All the secretions must be restored, as this is the grand principle in the cure of disease.*"

Some interesting observations follow, on the influence of the mind upon the body in health and disease. Grief has great influence in producing disease and preventing recovery; it is the opinion of our author, that "the two worst forms of disease to which the human body is liable (cancer and fungus) are frequently produced by grief and anxiety." The influence of anger in disturbing the healthy actions of the body, is illustrated by the case of a man who had an ulcer, which had several times been brought to a healthy state, and as often it became inflamed and irritable; at length it was found that he was, in his family, exposed to sources of great mental irritation, when he was directed to take an apartment distant from the sources of angry excitement: and there, under the same treatment, he recovered without any further relapse.

But fear has the greatest influence in destroying our best efforts to cure injuries or diseases. The following is a striking illustration of the fact.

"Often have I known patients declare, after an accident, that they were sure they should not recover; and they seemed to be deprived of all restorative power. Not long since, a per-

son came to me from the country, and described his symptoms, which induced me to believe that he had a stone in his bladder: I sounded him and found a stone. When I informed him he had the stone, he said, "I hope not, for I can never submit to an operation." I prescribed some medicine for him and he returned into the country, where he died in a few days after."

Mr. Cline removed a small tumour from the breast of a lady, who, although unwilling, and strongly impressed with the idea that the operation would be fatal, was prevailed upon by her friends to submit. She died in an hour after the operation; "and it was found that she had arranged her family and domestic concerns in such a manner, that no confusion should arise from what she thought her inevitable doom."

Other examples of the influence of fear are given. A child, aged ten years, was terribly frightened by one of his school fellows, it made his head ache, and on the next day he became entirely deaf.

LECT. II.—On inflammation. "The means by which local injuries are repaired." The usual signs indicative of inflammation are given. The increased sensibility in inflammation, according to Sir Astley, "arises from the extension of the nerves, by the greater quantity of blood determined to them," "not only is the sensibility of a part increased, but its irritability is exceedingly augmented by inflammation." If amputation be performed through an inflamed part, severe pain is inflicted, the stump will not unite by adhesion, but passes into a suppurative, and, sometimes, a sloughing state.

According to Sir Astley, inflammation has only four terminations. 1st, In adhesion, from the effusion of the fibrin of the blood, and not as had been supposed of albumen. 2d, In suppuration. 3d, In absorption and ulceration. 4th, In gangrene. "These are the local effects; and the constitutional, which accompany them, are the different symptoms of *irritation*."

Inflammation produces different results according to the structure affected. When seated in the *skin*, it usually becomes extensive; its colour is very florid. Inflammation in the *cellular membrane*, when chronic, occasions adipose or steatomatous tumours, or, under peculiar circumstances, scirrhus, fungus, &c.

Inflammation of *fasciæ* is generally extensive, it is often seen in compound fracture, producing redness of the skin to a considerable distance; which should not be mistaken for

erysipelas. When matter is formed under this texture, great irritative fever succeeds until it be discharged.

Muscles are known to be inflamed, by the spasmodic twitchings which accompany it. *Tendons* do not easily inflame, but when this occurs, matter forms in the course of the tendon, which, in some cases "sloughs to its junction with the muscle," and always to a greater extent than the surrounding parts. "Punctured wounds of tendons are apt to produce tetanus, more than wounds of other parts."

Arteries rarely inflame; inflammation in them, however, sometimes extends even to the heart, when a ligature is applied on one, in a person of bad constitution. A man, whose leg Sir Astley had amputated, rose from his bed, had low muttering delirium, great irritative fever followed, "and, what I have generally observed in inflammation of the blood-vessels, pain in bending his joints, from its changing the position of the vessels." He died; and, on examination, suppuration was found in the femoral artery, above the ligature, and inflammation of the inner coats of the other vessels.

"*Veins*, inflamed from wounds, form hard and broad cords, extremely tender to the touch, and, if from bleeding, from the wounded part to the axilla. I have seen several patients die from this cause; and in the greater number the bleeding was required for dyspnœa." Suppuration in the veins sometimes takes place; when they inflame from ligatures, they generally do so more below the ligature, than about it, and "excessive distention, from the interruption to the return of the blood, seems to be the cause. I have seen several persons die from ligatures being put on one of their veins."

"*Nerves* are rarely inflamed; but when it happens, the pain is excessive; there is a tingling feel in the parts to which the nerve is distributed; there is no redness of the skin, although great tenderness to the touch," though very severe at the moment, wounds of nerves are followed by little irritation. "I have had occasion twice to remove portions of the sciatic nerve, and but little constitutional irritation followed."

Inflammation is healthy or unhealthy;—in a healthy constitution, it is "a *vis medicatrix naturæ*, established for the purpose of restoration; but the inflammation which occurs without any obvious cause, is of an unhealthy kind, and arises from an irritable constitution, and from the enfeebled state of the affected parts.

Inflammation is acute or chronic, common or specific. There are two descriptions of the specific; one produced by

a peculiar condition of constitution, as gout, scirrhus or cancer, scrofula, &c., the other, by the application of a poison as gonorrhœa, &c. We give the following description as original with Sir Astley, in his own words. "There is another kind of inflammation, which I would call the irritable; in this disorder the blood-vessels are much less affected than the nerves. You are called to attend a person, who tells you that he feels in the hand, arm, or some other part, most agonizing pain: if not experienced in these matters, you will be inclined to doubt the correctness of your patient's statement, as you cannot discover any diseased appearance of the part. Some time ago I was consulted by a lady who had this painful affection in the foot, and I employed various remedies without her being relieved: finding no improvement, and suffering in health, she went to the coast, and there used a steam bath; and, without any further means, the pain quickly subsided. The eyes are very subject to this torturing disorder. But no part is more frequently attacked by it than the breasts of young women. It produces such a degree of tenderness, that they cannot bear the slightest pressure: the pain extends to the shoulder, down the arm, and even to the elbow and fingers, accompanied by constitutional irritation. To cure these pains, and general derangement, such medicines must be given as will influence the secretions, but especially that of the uterus. This irritable inflammation sometimes attacks the testicles, rendering them extremely sensitive, so that the patient can scarcely sustain the pressure of his cloths. It is attended with little increase in the size of the gland. I have been obliged to remove the testicle in three persons for this disease. The subject of one of these operations was a gentleman from South Carolina: he came to England for advice, and consulted many of the surgeons in London, but without experiencing any relief of his sufferings, from the various remedies they advised. He at length requested me to remove the torturing part; this I did, and he returned to his native country quite well. The bladder is also occasionally disordered by this irritable inflammation, and the symptoms, in many respects, resemble those of stone; in in both cares there is pain in making water, and blood is sometimes mixed with the urine. The grand difference in these two cases is this: the irritable bladder is most painful when distended; that which contains a stone, when emptied. On dissection, the inner coat of an irritable bladder has been seen the colour of red velvet. I have known this irritable inflammation attack the rectum, and produce excessive suf-

fering, which was relieved by large doses of soda.—Soda, rhubarb, and the compound powder of ipecacuanha, are the best remedies."

The lecture concludes with some observations on the causes of inflammation, these we shall pass over, as we wish to confine ourselves principally to the interesting practical matter contained in these volumes.

LECT. III. *Treatment.* This is either constitutional or local: the most powerful constitutional means of relieving inflammation are, by bleeding, which acts by diminishing the nervous power, and by lessening the momentum of the circulation. The indication for general bleeding is a hard pulse; in this state of pulse the diameter of the vessel is greatly diminished, yet its action is strong. Quickness of pulse is a proof of irritability, which bleeding will increase, but "when united with hardness, no additional evidence of its necessity can be wanted." A buffy state of the blood, is not a sufficient indication for a repetition of bleeding, Sir Astley has seen it in the last stage of scurvy. "If the quantity of serum be very large, unless there are other indications for bleeding, this circumstance is an evidence against the repetition of blood-letting. Some excellent directions are given for the abstraction of blood. In patients suffering from an injury which will require considerable time for its restoration, we should be exceedingly careful how we abstract blood from the general system, and must in preference adopt local bleeding; "for if you adopt a system of free depletion; nature will not be equal to the restoration of the injured parts, and the most disastrous consequences follow the indiscriminate employment of blood-letting. There is not a greater error than this in the practice of surgery."

The second mode of relieving inflammation is by increasing or restoring the secretions, which are generally diminished or suppressed. The most important secretions are those of the liver, intestines, skin and kidneys. "*Purgatives* afford relief in nearly the same manner as the abstraction of blood from the arm; for a pint of serum will pass off with the fæces, after taking a brisk cathartic;" they also produce a beneficial effect by irritating the intestines; blood is determined to them, and it is abstracted from the part inflamed. "It is of little use to produce action in the intestines, unless you also excite the secretion of the liver;" the best plan is to administer some mercurial medicine at night, and a purge in the morning. Diaphoretics operate by evacuation of the serous parts of the blood, and by determining blood to the surface,

and consequently, removing it from the inflamed part. Some observations follow on the means by which Sir Astley preserves his own health, which are temperance, early rising, and sponging his body every morning with cold water, "a practice I have pursued for thirty years; and though I go from this heated theatre into the squares of the Hospital, in the severest winter nights, with merely silk stockings on my legs, yet I scarcely ever have a cold."

The remedies employed in the treatment of *chronic inflammation*, must have a *slow and gradual action* on the secretions. "The principle on which this disease is founded, is the arrest of some of the secretions; and its successful treatment depends upon their restoration."

Calomel and opium are recommended; the most common, and probably, as a general one, the best medicine in chronic inflammation is the pilul. hydrarg. submur. comp., "it acts at the same time on the liver, intestines, and skin; and if you can succeed in restoring these secretions, the disease will disappear; for, in proportion as you increase the secretions, you will excite the action of the absorbents."

"Another excellent medicine for the cure of chronic complaints is, the oxymuriate of mercury (corrosive sublimate,) dissolved in nitrous æther, and combined with tincture of bark or of rhubarb, or with the decoction of sarsaparilla; continue it for some time, watching its effects with care, always keeping in mind that mercury, given to excess, will tend to increase rather than destroy constitutional irritation; as sarsaparilla seems to possess the power of lessening irritability, we frequently give it with mercury, and in this combination they are administered with the greatest advantage."

Local treatment of Inflammation: numerous valuable directions are given on this subject. Cold applied generally and gradually, diminishes the power of the nervous system, and lessens arterial action; applied *locally* to an inflamed part, robs it of its heat, lessens its nervous energy, and diminishes the diameter of the vessels. Cold applied to excess, destroys life by the great abstraction of heat. One of the best lotions for producing cold in an inflamed part, is one ounce of rectified spirits of wine, and five ounces of water; "on applying this solution let the linen be fine, and put lightly on the inflamed part, that evaporation may go on with facility."*

* Lead water when applied too long has been known to destroy nervous irritability in too great a degree; the upper eye-lid of a person in Guy's Hospital, became completely paralyzed from its improper application.

"Do not put ice itself to an inflamed part; it irritates and is apt to produce gangrene." An example of this is given as occurring in a case of strangulated hernia under the care of Mr. Cline; in deep-seated inflammation, however, as of the brain, "the application of ice to the scalp is of signal service."

The application of *heat* alone to an inflamed part, would be injurious; but when combined with *moisture*, it is beneficial, by producing relaxation, and inducing perspiration. Fomentations are ordered on the same principle. Sir Astley does "not think that medicated fomentations are preferable to mere warm water, unless the integuments be broken." From our own experience, however, we are induced to believe, with Mr. Tyrrell, that anodyne fomentations "are of considerable service in alleviating local irritation."

Directions follow respecting the application of leeches, scarification, cupping, which, though interesting, contain nothing new. In the applications of stimulating lotions, in chronic inflammation, "the parts should be covered with oiled silk, to prevent evaporation, by which cold would be produced, and your intention frustrated." *Rest and position* are circumstances of considerable importance to be attended to in the treatment of inflammation.

Indurations remaining after inflammation has ceased, are removed by such means as produce absorption, as pressure, electricity, mercury, friction, &c. "In cases of violence done to joints when the inflammation has been subdued, which it will be in a month or six weeks, friction and motion are very useful: but in chronic diseases of joints, many months of rest will often be required before inflammation has sufficiently subsided to allow of friction and motion being safely used to prevent anchylosis."

LECT. IV.—*On adhesive inflammation.* Having noticed its effects on the blood, the result of inflammation of *serous* and *mucous* membranes is next shown: the former readily assume the adhesive inflammation; "this is a most beautiful and wise provision of nature, for if the membranes of cavities, as the pleura and peritoneum, instead of the adhesive, were to produce the suppurative inflammation, effusion and death would be the frequent consequences;" whilst, on the contrary, "had the outlets (mucous membranes,) of our bodies been subject to the ready production of adhesion, they would have become closed, and life destroyed."

The time required for the production of adhesion, varies according to the structure of the part and nature of the con-

stitution. "In the cavity of the abdomen, the intestines will be glued together in nineteen hours after the adhesive inflammation has begun." In other wounds the process takes place rapidly; if lint be applied to a wound, in twelve hours it will be glued firmly to the surface.

This process is of the greatest possible importance in surgery, without it, no operation could be attended with success. A man was admitted into Guy's Hospital with a compound fracture, "which was rendered simple by applying lint dipped in blood, and in a fortnight all danger from the accident was dissipated." The cæsarian section is not dangerous if the adhesive process takes place. Its advantages is exemplified in the extraction of cataract, here, more than half of the cornea is cut, adhesion begins within twelve hours, and in twenty-four the edges are consolidated: if they do not adhere, violent inflammation supervenes, and the result is destruction to the eye by suppuration. Again, in the operation for strangulated hernia, an opening is made through the hernial sac, which communicates with the cavity of the abdomen; and, if the parts are not afterwards united by the adhesive process, the patient dies. In the operation for the radical cure of hydrocele, we have an excellent opportunity of witnessing the effects of adhesive inflammation.

The treatment of a stump after amputation best exemplifies this subject. Here, the first object is to preserve sufficient *integuments* to cover the ends of the bone; when the limb has been removed ligatures are applied to the bleeding vessels; "now I would not advise you to tie every smaller vessel, for by waiting a short time, the bleeding from the smaller arteries will generally stop;" ligatures on the principal vessels are quite sufficient, and the fewer applied the better. Ligatures should be small and consist of fine silk; whether composed of silk or *animal substances*, one end of the ligature should be cut off close to the vessel, for "although adhesion followed, and suppuration did not ensue in one case where I applied an animal ligature to the femoral artery, I have tried it in several cases since, and have not been able in any to prevent suppuration."

"After the vessels have been secured, the sponge should be applied, and all coagula of blood be removed, as this is very essential to the union of the part; blood is not the means but the prevention of union in such cases; for unless it be removed, the adhesive inflammation will not produce its desired effect. There is one instance in which blood favours the process of adhesion, and that is in the application

of a ligature on a blood vessel; for a clot of blood forms in the artery, and is afterwards glued to its interior by the adhesive inflammation: with this exception, the opinion of blood producing the process of adhesion, is to be banished from your minds."

Sir Astley's method of dressing a stump is so essentially different from that generally taught and pursued in this country, that his observations on the subject should be borne in mind. We give them in his own words:—"Having applied a roller, and brought the integuments together, I merely put three strips of adhesive plaster over the wound, and two round the stump, to keep the ends of the plaster in their place. It is curious to see the difference between the mode of dressing stumps now, and that adopted a few years ago. The old practice was, after the adhesive plaster had been applied, to put some lint, then plaster again, after that tow, and lastly, over the whole, a cap of flannel. If a surgeon were to do this now, he would be laughed out of the operating theatre; and very deservedly, because he would prevent the success of the adhesive process by undue heat in the limb.

"All that is necessary to do is, to use three strips of plaster over the wound, and one circular piece; if the weather be hot, to apply spirit of wine and water; and if cool, to keep the limb quiet. The object is, to prevent the inflammation passing beyond the adhesive stage; for then suppuration must be the result."

"This treatment, which is applicable to stumps, is proper also for common wounds; so that these are the principles by which you are to be directed."

The facility with which the soft parts unite by adhesion, has led to its application for the separation or restoration of portions which have been destroyed by disease, or designedly mutilated. Mr. Carpue has several times performed the old operation of forming a new nose, with success. Mr. Lynn has made a new under lip, by bringing the skin from beneath the chin. "I have made a new portion of urethra from the skin of the scrotum, and Mr. Earle has performed a similar operation with success."

Lect. V.—*Suppuration.* Having detailed the constitutional and local symptoms of suppuration, the time required for the formation of pus is noticed: "If seated under a tendinous structure, abscesses are very slow in proceeding to the skin, on account of the difficulty which attends the ulcerative process in tendons. In a healthy constitution, from seven to fourteen days will be required to form and to break an ab-

scess in the breast of a female, who is otherwise healthy, although it is sometimes a much longer time."

The fact that mucous surfaces more readily take on the suppurative inflammation, than serous, is again adverted to. "The vessels of mucous surfaces being large, allow of the passage of the globules of pus more readily than such globules could pass through the vessels of serous surfaces, which naturally secrete the more watery parts of the blood." "Pus is but an altered state of the blood, produced by the extremities of the secreting vessels upon the natural surface, or upon the granulations of an ulcer. It is composed of serum, fibrin, and globules; and if I were to hazard a theory upon this subject, I should say that pus was composed of the constituent parts of the blood, slightly changed in their character by inflammation." In a healthy state it has not a putrefactive smell; but changes in the constitution will sometimes render it excessively putrid, and consequently more liable to affect the constitution. Matter will be also rendered offensive by local circumstances, as by diseased bone. A state of fever, will suspend the secretion of matter; its character also becomes changed by local inflammation, serum is substituted for pus, which often irritates the surrounding skin and produces excoriation, whilst pus formed in its usual manner, is incapable of producing irritation on the surrounding parts.

The poisonous quality of the matter of gonorrhœa, small pox, &c., and the utility of suppuration in protecting granulations and in expelling extraneous bodies, are next noticed. The following cautions are highly important: "When sores have long existed, some caution is necessary in healing them: nature appears to produce a quantity of blood equal to the discharge which they have supported, and to continue to do so after it has ceased. Inflammation of the lungs and apoplectic seizures will sometimes follow their sudden cicatrization. This may be prevented by great attention to the secretions, by giving frequently calomel at night, and an aperient in the morning; or by occasionally taking away blood, when the above symptoms intervene. The surgeons of former times made issues, or setons, with the same view; but they are now very much discontinued, because by such attention as I have advised their use is superseded. But still it cannot be denied, that a sore will sometimes relieve symptoms of diseased lungs, and even of determination to the brain, independent of any direct counter irritation upon the affected part."

The suppression of discharges from the ear is attended with great danger of producing matter on the brain. "I can

call to mind eight cases of inflammation of the brain, produced by suppression of suppuration in the ear."

LECT. VI.—On *Ulceration*,—or "the absorption of any constituent part of the body." The influence of inflammation is not confined to the arteries; the absorbents are also thrown into a state of inordinate action whenever any considerable quantity of blood is determined upon them. The formation of matter is not necessary to the process of ulceration; and "the great cause of ulceration, is inflammation united with pressure," as exemplified in "aneurism of the aorta in the fore part of the spine, producing absorption of the vertebræ by the pressure of the aneurismal bag, though no matter is effused; the ulceration being produced by pressure, accompanied with slight inflammation, but not by any secretion of matter."

It is a law with respect to ulceration, that it has a tendency to the nearest external surface; if matter forms on the abdominal muscles, the peritoneum is very rarely absorbed to admit the matter into the cavity of the abdomen, but it makes its way through the integuments and finds an outlet on the surface. In abscesses of the liver, &c., the matter is discharged into the cavity of the stomach or intestines, which may be considered the nearest outlets.

"Those parts of the body which are newly formed, are more liable to be absorbed than those which have long existed. A part covered by a cicatrix proceeds rapidly to ulceration, because it is more weakly constituted than those which have existed longer. The irritability of a part is proportional to its weakness."

Parts most remote from the heart ulcerate more readily than those in its vicinity; thus, for one ulcer in the arm we find twenty in the lower extremities. Parts slightly organized ulcerate with difficulty as tendons, &c. "Hence the process of absorption proceeds with great difficulty, and tendons will slough to a great extent, rather than become absorbed; *this circumstance must influence our practice.*"

The ulcerative process is useful to the animal economy, in removing extraneous bodies from the system; and in the exfoliation of bone, in separating parts which would otherwise remain in the body, perhaps during the life of the individual.

Abscesses are next considered. These are dangerous, first, from their size. "It is not, however, the quantity of matter produced which renders them dangerous; but the difficulty which nature has in repairing the devastation made by excavation of the solids, from the pressure of the matter."

A very large abscess may exist, and the constitution be scarcely affected by it; but soon after it is opened the constitution begins to suffer. Having evacuated the matter, the propriety of endeavouring to procure the adhesive process, by bringing the sides of the abscess together by rollers, is exemplified. "Very large abscesses sometimes terminate favourably, but in a great number of cases they destroy life." We recollect to have seen a patient under the care of Drs. Brookfield and Jewel, in the neighbourhood of this city, who had an abscess extending over nearly the whole of the back and one side, from which an immense quantity of matter was evacuated, and by judicious management the patient speedily recovered.

The next circumstance which renders abscesses dangerous, is their number; thus in small-pox, after suppurating, the pustules die away, and the cuticle is separated; and in many cases nature cannot repair the destruction of the cutis; great irritation follows and the patient dies. Abscesses are dangerous when situated in vital parts, as the brain, heart, &c. They are also dangerous from their pressure on organs essential to life. "A gentleman came to me who was labouring under great difficulty of breathing, and requested me to examine his throat; having put my finger on the back of the pharynx, and felt fluctuation there, I immediately passed a trochar into the pharynx, when a considerable quantity of matter was discharged, and the patient was relieved. This was a case, which, but for an operation, would probably have terminated fatally by the pressure of the matter on the glottis and epiglottis." There is also another danger, if matter forms between bones and their coverings, as in psoas abscess; the reason is, "the union between the soft parts and bone is with difficulty produced, and the process of restoration is extremely tedious."

Abscesses are acute or chronic. In the former it is about three weeks from its commencement, before matter is discharged. But chronic abscesses are slower in their march: they sometimes occur in the female breast, when we should be cautious to distinguish them from scirrhus. Sir Astley says, he has seen two tumours of the breast removed, which were only chronic abscesses; and he himself was about to perform an operation of the kind, on a lady who had a tumour for a considerable time, when he perceived slight fluctuation, and on making a small opening into it, a quantity of matter gushed out.

The prevention of scars is a great object, particularly in

exposed parts, as in the necks of females. "I have seen on one side of the neck large scars from abscesses that had been badly managed; whilst on the other side, where the treatment had been more skilful, scarcely any vestige of a wound was to be seen. I have from very early practice, and subsequent experience has proved to me its use, been exceedingly careful in the management of these cases. Aperients, with calomel and rhubarb, should be given; evaporating lotions should be used: you must be strict as to regimen and diet; the food must be nutritious, but not stimulating. The best mode to adopt in these cases, is to open the abscess before the skin be much affected, and as soon as a blush has appeared; thus scars will in general be prevented. It is desirable, in opening the tumours, to use a very fine knife, for two reasons. 1st, A small opening is made; 2d, It does not alarm the person. The knife I always use has the blade an eighth of an inch wide, and it appears to the patient as a needle. When you press the sides of the wound, take care to squeeze out all the solid flakes of matter to be met with in scrofulous tumours. If this be not attended to, they will at last slough; but if, on the contrary, you carefully avoid leaving any of that unorganized substance, adhesion will take place, and the wound will heal. Almost every thing, in these cases, depends on getting rid of the solid matter. Bread poultices, mixed with a sulphate of zinc lotion and spirits, may be afterwards used."

There is a point of great importance to be attended to, that is, the direction in which the opening is made; it should always be made transversely, and not in the axis of the neck, "for when the wound heals, it will be scarcely seen among the creases or folds of the skin."

Some observations follow on the causes of hectic fever. "The belief of the absorption of matter being the cause of hectic fever is unfounded; for it is merely the result of the efforts of the constitution to repair an injury, or to cure a disease." Undoubtedly, the inoculation of putrid matter will sometimes produce fatal consequences; but the proofs that the absorption of common matter does not produce irritative fever, are, 1st. It is not during the accumulation of matter in abscesses, but after they have broken, that the fever appears; 2dly, The degree of fever is not at all proportionate to the size of the surface on which the matter is formed; 3dly, Hectic fever often appears when matter is not formed.

The lecture closes with some observations on the influence of air when admitted into abscesses. Sir Astley does not believe that the irritation attending the opening of abscesses,

is produced by the admission of air; "the cause is, the division of the blood-vessels, and not the presence of air; and its degree depends upon the ease or difficulty with which the injury is repaired."

LECT. VII.—The lecture commences with some observation son the formation, character, vascularity, and absorbent power of granulations. In ulcers recently formed granulations are not good absorbent surfaces; but if the ulcers have existed for any length of time, the absorbents readily take into the system some substances which may be applied. In this way we sometimes see persons salivated by the use of injections of the oxymuriate of mercury. "I have known the *black wash*, when applied to the surface of ulcers, produce an effect upon the mouth in persons who are easily affected. I believe that the lotion of the liquor calcis and calomel often produces good effects in sores, by the mercurial action which it excites in the system, and not merely by its local effects on the sore to which it is applied."

Arsenic applied to the surface of sores is very frequently absorbed into the system; and on this account it is to be regarded as a very dangerous remedy, producing great derangement of the stomach, the intestinal canal, and the nervous system, and sometimes paralysis. Quacks are in the habit of destroying tumours of the breast by the use of arsenic. "Mr. Pollard told me of a person, in town, who applied an arsenical preparation for a scirrhous affection of the breast, and the patient died in less than a week." Other examples are given of the distressing effects resulting from the application of arsenic.

"Opium, when applied to the surface of sores, is very readily absorbed into the system. I believe that it is often a very useful application to the surface of wounds. A case of tetanic affection happened in a child, whose leg had been amputated by Mr. Lucas, the late surgeon of Guy's, and the application of opium to the stump gave more immediate relief than I ever remember to have witnessed. It relieved the spasms, and, as I believe, saved the child."

The effects of opium on the constitution, when thus absorbed, are very much the same as when it is introduced into the stomach. "I have known a solution of opium, applied upon an extensive scald in a child, destroy it." In a note Mr. Tyrrel says, "I have seen a temporary amaurosis produced in two cases by the application of extract of belladonna to the surface of irritable ulcers. The pupils of the eyes were extremely dilated, as from the application of the ex-

tract to the organ itself, and the patients were incapable of distinguishing any objects for some hours. In one case I repeated the application, when it produced exactly similar effects."

Granulations very readily unite with each other; the mode in which this union is effected, is by bringing the edges of the two granulating surfaces together, so as to produce the adhesive process. "The surface of the granulations is covered by adhesive matter, and you have only to apply the two surfaces to each other to produce an union. The knowledge of this principle is often highly useful in the practice of surgery."

Our attention is next directed to the subject of *Cicatrization.* The formation of new skin with which a sore is covered, is called cicatrization; it takes place in the following manner:

"The vessels at the edge of the skin form granulations, and these unite with the granulations of the surface of the sore; those produced from the edge proceed towards the centre, and inosculate with the others on the surface of the sore, and are united by the adhesive process. The vessels become elongated from the edge of the sore, and proceed in radii from the circumference to the centre. Day after day an addition is thus made to the cicatrix, until at last the vessels reach the centre from every part of the circumference, when the process of cicatrization is completed."

After the cicatrization of an extensive sore, more especially from a burn, the new-formed skin contracts, occasioning great deformity; now no censure can be attached to the surgeon in this case, for "deformities of this kind generally arise after the process of healing is completed; they are the effects of the contraction of the cicatrices."

In the formation of cicatrices, the original parts may all be reproduced, except two. The cuticle, rete mucosum, cellular membrane, tendons, bones, and nerves, are reproduced. The parts of the body which are not reproduced, are muscles and cartilages; the former unite by tendon, the latter by bone; "this, however, will depend, in some measure, on the age of the person; for in very young subjects cartilaginous union will be produced, but in persons more advanced in years, the cartilages of the ribs unite by bone."

Lect. VIII.—*On Ulcers.* It is unnecessary to enter into an analysis of this lecture; we shall, therefore, merely select some of the most important facts contained in it.

In *gangrenous ulcers*, the best application to check gan-

grene is the nitric acid; fifty drops of it to a quart of water, which may be increased to a drachm if it gives no pain; "I have seen, in a short time after this application, a quick separation of the parts from sloughing, to which there is always a tendency." Nitre, one drachm to a pint of water, has the same effect, though in a diminished degree. Ulcers occasionally form on the fingers and toes, and produce great irritation from the nails growing in and penetrating the integument. To relieve this affection, the nail should be pared down as thin as possible, its edge raised, and a small piece of lint interposed between it and the sore; sometimes the sore is so extremely irritable that lint cannot be lodged on its surface; in such cases, "with a pair of scissors, I slit up the nail on the side where the disease exists, and then, with forceps, turn back, and sometimes completely remove, the divided portion." The application of a blister will sometimes cure these cases; it brings away the cuticle and often the nail.

With the ordinary method of treatment in *varicose ulcers*, "another great benefit is derived, in these cases, from opening the veins; the best plan is to puncture them by means of a lancet, twice in the week as long as you think they require it; a bandage should be afterwards applied, and the parts kept wet by means of evaporating lotion. No danger whatever attends the opening of these veins, and very great relief will be afforded by it." Some observations follow on the practice of tying the saphena vein, and several cases are adduced, where death has resulted from it; Sir Astley therefore condemns it as "injudicious and fraught with great danger. If I were asked which of the following operations I would rather have performed upon myself, viz. the saphena major vein or the femoral artery tied, I should certainly choose the latter."

"Ulcers are sometimes occurring in the cellular membrane, which I call *chronic carbuncle*.

"When the constitution is impaired, from any cause, it frequently happens that small swellings form under the skin. At first they are red, then turn purple, and ultimately slough. The ulcerative process is slow in these cases. A white substance will soon be perceived at the bottom of the sore, called vulgarly a core; and as soon as this separates, healthy granulations will form, and the wound become healed. Constitutional treatment in these cases is absolutely necessary; for unless you improve the general health, the ulcers will not heal. You should administer aperients, such as the in-

fusion of senna, Epsom salts, &c. and give alteratives; the Plummer's pill will be found the best medicine. For females, where great general debility has given rise to the formation of these sores, no medicine can equal in power the carbonate of ammonia. I generally give it in the following form:

"R. Ammon. carb ℥ss.
Aq menth virid ℥vss.
Tinct. cardam. comp ℥ss.
M. ft. mistura."

Three tablespoon-fuls may be taken two or three times a-day. If poultices do not excite the granulating process, the black wash may be employed, or the surface of the sore gently touched with nitrate of silver. In a note Mr. Tyrrel says, "that the cure is much expedited by making a free incision through the swelling; as it allows the core, or dead cellular substance, to escape."

"There is an ulcer often existing on the face, called *noli me tangere*. This disease has never been correctly described; the truth is, that it is an ulceration of the glands, or follicles of the nose, those small cavities from which you can squeeze sebaceous matter; the ulceration extending deeply, at last even the cartilages of the nose become destroyed."

The following prescription is recommended for the cure of this disease.

R. Arsenic oxyd.
Sulphur Flor āā ℥j.
Ungt. cetacei ℥j.
M. fiat unguentum.

Apply some of this ointment, on lint, to the ulcer, and leave it there for twenty-four hours, and then remove it, a slough will separate; the sore should be dressed with simple ointment or a poultice, when it will soon heal. If the ulcer is not deep, it may be cured by painting the surface of the sore daily with a solution of nitrate of silver.

Lect. IX.—*Gangrene* is produced either by an excess of inflammatory action, where the powers are natural, or by a less degree of inflammation, where the powers of the part are feeble; the symptoms differ according to the manner in which it is produced; when it is the result of high and active inflammation, the pain is severe; the inflammation extensive; there is a blush on the surrounding skin, and generally considerable swelling. The cuticle is raised; a vesication is

produced, this breaks and bloody serum is discharged; the skin then assumes the gangrenous appearance. The constitution also suffers severely.

Gangrene is sometimes the effect of a low degree of action; thus, if cold be applied to any part for a considerable time, the part will become benumbed; that is, its nervous power will be diminished; thus enfeebled, it is unable to bear a very slight degree of supervening inflammation, and the death of the part will follow. A person may have been exposed, for some time, to severe cold; some parts of the body are benumbed; in such a case great care must be taken not to apply heat too suddenly; "even the common heat of the bed frequently occasions inflammation, which is extremely liable to gangrene, in consequence of the diminished nervous influence of the part. A gentleman had been shooting, and had exposed himself to severe cold, and finding his feet benumbed on his return, he immediately put them into warm water. The consequence was, that a gangrene took place, of which, notwithstanding every care, he died."

When gangrene is produced by either of the above causes, the process of separation soon commences. The first appearance we observe is a white line in the skin. "At this white line the cuticle is raised; this elevation of the cuticle is a vesication, which forms a line of circumvallation around the gangrene." The next part which begins to separate is the cellular tissue; gangrene proceeds to a greater extent in this tissue than in the surrounding skin, because of its weaker living powers. "It is for this reason that a sloughing disposition is so dangerous in sores extending to the cellular membrane. A small chancre beginning in the pudendum of the female, or in the prepuce of the male, will frequently occasion the destruction of life in the part."

Muscles and nerves separate nearly opposite the edges of the skin. Tendons, however, from their weak living powers, are incapable of resisting the inflammation, and separate, therefore, at the part where they join the muscles. In like manner, arteries and veins separate; the blood in the vessels of the dead part coagulates; this coagulum extends to the living vessels, and becomes adherent to the inner side of the vessels, so that they are, as it were, hermetically sealed, and no hæmorrhage can take place on their separation. "I have seen the coagulum, in the femoral artery, extend at least six inches above the place at which the gangrene had occurred." Bones at last become separated, but this process is very slow;

hence, we are often under the necessity of taking them away when the process of separation is, in other respects, complete.

Gangrene is frequently the result of debility; thus, if a person has been confined by long-continued fever, the nates are apt to slough, in consequence of the imperfect circulation, arising from the position in which he has been forced to remain. Some fevers have a greater tendency than others to produce gangrene, as scarlatina, measles, &c. Mercury, if used to excess, in short, whatever weakens the constitution much, disposes it to gangrene in the same way as the application of cold.

Gangrene sometimes, though very rarely, happens without inflammation; "I have seen, in a case of hydrothorax, a small spot on the leg become at once black, without any appearance of inflammation, and extend itself until it occupied a very large surface. Here the total absence of circulation, and not an increased degree of it, occasioned the destruction of life in the part." So we now and then see aneurism producing gangrene by its pressure on the vessels, and the same effect resulting from the division of a large artery.

"The nature of gangrene," says Sir Astley, "as far as dissection enables me to judge of it, is this; the excessive action of the part kills the blood-vessels, and the blood contained in dead vessels becomes coagulated;" therefore, if it is attempted to inject a part after gangrene, the injection will not enter the vessels. Such being the state of parts under gangrene, "they can never be recovered, because blood cannot again circulate in their vessels.

Treatment.—To prevent gangrene, local bleeding, by leeches, with a view of checking the excess of action, may be employed; in general, the condition of the patient forbids the abstraction of blood from the arm, but when the constitution is good, this may be done, observing "not to remove more than eight or ten ounces, lest the vigour of the circulation, and consequently the nervous power of the constitution, should be too much diminished. Soothing applications, as poppy fomentations and poppy poultices, are useful."

"Two or three grains of sub-muriate of mercury should be given at night, with a view of restoring the defective secretions of the intestinal canal and the liver; and the liquor ammoniæ acetatis, with a few drops of the tincture of opium, should be given several times in the day. By the calomel you restore the secretions; and by the opium you tranquillize the system, and diminish the irritability which leads to the destruction of the life of the parts."

In cases of gangrene arising from the application of cold, the action of the parts is feeble, from the diminution of nervous power; the principle here is "to stimulate gently, but to moderate the stimulus by evaporation." The best application, to benumbed or frozen parts, is the camphorated spirit of wine, rubbed on with the utmost possible gentleness, so that the part may not be irritated by violent friction. When the first effects of cold are removed, cold poultices should be applied to the part. When parts are more severely frozen, "the practice is to restore the circulation by rubbing them with snow; the friction is a stimulus, which the melting snow moderates."

When gangrene has commenced, it is necessary to apply a gentle stimulus, with a view of supporting the action of the surrounding parts; for this purpose, a poultice of stale beer-grounds, mixed with oatmeal, is the most useful; spirituous fomentations are also useful. The constitution must be carefully attended to; when it is much weakened, seven or ten grains of carbonate of ammonia, with twenty drops of laudanum, should be taken three or four times a-day. An excellent medicine is a bolus of five grains of carb. ammon. with ten grains of musk, given every four hours. A change in the local remedies is often required; "a girl in St. Thomas's Hospital had a gangrenous sore on the pudendum, where a great variety of applications had been tried without any beneficial result. At last a port wine poultice was applied, and with such immediate good effects, that, though I had before despaired of her life, the sore soon assumed a healthy appearance."

Where the course of the blood has been arrested, as in the tying of a large artery, sloughing sores are apt to occur. In such cases, the spirit of turpentine is the best application. The following preparation is much used in Guy's Hospital in these cases.

R Confect. ros. ℥j.
Mel. rosæ
Tinct. opii. āā
Liq. plumbi. subacetat. } ℥ij. M.

This is an excellent application to limbs in a state of gangrene, when the dead are separating from the living parts. "During the sloughing process, the nitric acid, fifty drops to a pint of water, is upon the whole the best application that can be used." Vinegar and the camphor mixture, four ounces

of the former, to twelve of the latter, sometimes produces good effects.

The propriety of amputating is next considered. The cases where amputation is required, are those in which the patient is unable to sustain the constitutional derangement produced by the process of separation; but when the constitution is strong, the patient will be able to bear the process. "In constitutional gangrene, as a general principle, do not amputate till the sloughing process has commenced, and healthy granulations appear." The loss of a very slight quantity of blood will often destroy life in these cases. In gangrene from accident, amputation may be performed without hesitation, for "instead of increasing the irritability of the constitution, by removing the cause of irritation, it becomes the means of preserving the life of the patient." In the gangrene of old persons, attacking the toes, "whether there be healthy granulations or not, do not amputate; for as surely as you do, mortification of the stump will supervene, and death quickly ensue."

Carbuncle is next noticed: the treatment of this consists in making upon the surface of the swelling, at an early period, a large crucial incision, to enable the dead parts to escape; then apply a port wine poultice, and give the carb. ammon. and opium, as before mentioned.

The lecture concludes with some observations on erysipelas.

Lect. X.—*On Injuries of the Head.* These are dangerous from the influence which they produce upon the brain and nervous system. The causes or the symptoms of injury to the brain are two: concussion and compression. The different symptoms of concussion are described and illustrated by cases which have occurred in our author's practice.

"It is curious to observe the change which takes place in the intellectual faculties, as alterations are produced in the structure or state of the brain; the gradual diminution of ideas which have been recently acquired, until, at length, they become wholly obliterated. Old persons are observed to be fond of relating the anecdotes of their youth, forgetting incidents of more recent occurrence; and the change produced by injuries to the brain is somewhat similar to the effects of age; the patient loses impressions of a recent date, and is sensible of those which he has received in his earlier years.

"The degree of injury sustained by the brain in different cases, however, varies greatly. Some are only stunned or

deprived of sense for a moment, others recover in a few hours; some remain, in a great degree, insensible for fifteen to twenty days. Some recover entirely, others have afterwards an imperfect memory. A partial loss of sense will be sometimes produced in the function of one eye, or deafness in one ear, and so of volition, as the squinting will continne which has been produced by an injury of the brain. A degree of fatuity, in some cases, ever afterwards remains; great irritability will continue in some persons, in others the least excitement will produce pain in the head. In one case I knew a remarkable irritability of the stomach remain after concussion of the brain; so that the least excitement would produce vomiting; and this symptom, as well as the usual occurrence of vomiting, in these accidents, is probably produced by the direct communication between the brain and the stomach by the eighth pair of nerves."

"A permanent loss of memory is sometimes the effect of these accidents; frequently the patient has a difficulty in uttering the words which should express his ideas, and uses wrong terms; the judgment is enfeebled, giddiness, pain in the head, and great irritability of the nervous system, sometimes result from concussion."

Dissection.—When the injury has not been severe, it seems that the symptoms are merely the effect of a disturbance of the natural course of the blood through the brain—it seldom happens that this state of the brain destroys, but when it does, nothing is found upon examination which will account for the symptoms. "It is, therefore, an alteration of function, but not a disorganization." When the concussion is very violent, however, it is attended with lesion of the brain. "A knowledge of this leads to a judicious treatment of the injury, as laceration of the brain is frequently followed by extravasation; and concussion in the commencement, may be compression in its result."

"*Treatment.*—The great danger which we have to guard against in the treatment of concussion, is inflammation of the brain. This principle must direct our practice; and in order to prevent inflammation, we must, soon after the accident, take away a very considerable quantity of blood. By bleeding largely, we not only remove existing inflammation, but we prevent that which would otherwise occur. This practice, however, may be carried to excess. You must, in the repetition of bleeding, regulate your conduct by the symptoms; observe whether there be any hardness in your patient's pulse, and whether he complains of pain in the head, if he

have still the power of complaining: watch your patient with the greatest possible anxiety; visit him at least three times a day; and if you find any hardness of the pulse supervening, after the first copious bleeding, take away a teacup-ful of blood; but do not go on bleeding him largely, for you would by this means reduce the strength of the patient too much, and prevent the reparative process of nature. It is necessary that there should be a slight degree of inflammation, for without this the reparative process cannot proceed, or the patient ultimately recover: but it will be your duty to keep this inflammation within due bounds."

A patient was admitted into St. Thomas' Hospital, laboring under concussion accompanied with slight lesion of the brain. The gentleman under whose care he was, bled him largely twice a-day for several days. The consequence was, the patient became pale, the powers of the body weakened, and in ten days after the injury, died without any symptoms of inflammation of the brain. On examination, it was found that there was a slight laceration of the brain, with some degree of extravasation of blood; but not the slightest attempt had been made by nature to heal the wound. In this case then, "the quantity of blood taken from the patient was so large, that the slight inflammation necessary to the adhesive process was removed, and the powers of restoration consequently prevented."

Occasionally it becomes necessary to take away large quantities of blood, in repeated bleedings, where the patient is of very full habit. Here, however, the pulse must be watched with the greatest care, and the bleeding carried on as long as there is any remaining inflammation—so far as to reduce the hardness of the pulse, without diminishing the powers of the system. Bleeding is not to be resorted to the moment that an injury is received, for at this time there is a remarkable depression of nervous power. We should bear in mind, that bleeding is to be used "as a means of preventing inflammation," and consequently, that it would be injurious until reaction of the system had taken place.

Emetics have been proposed. The vomiting which occurs in cases of concussion, is to be regarded as a salutary effort of nature; it acts beneficially by "relieving the stomach of its contents, and by propelling the blood to the brain, and thus restoring the powers of life." "It is in *lenient* cases of concussion that emetics are useful: in lacerations of the brain they are dangerous."

Purgatives, as calomel, followed by the infusion of senna,

and sulphate of magnesia, should be administered; also, *diaphoretics*, and for this purpose, antimonials are the best. Dover's powder is not used, on account of the opium it contains. Counter irritation is of great use, and for this purpose, blisters to the scalp should be applied. All mental excitement should be avoided.

For the symptoms remaining after concussion, the trephine was formerly employed; "it is now completely abandoned."

Lastly, in the treatment of children; "as you cannot always bleed them from the arm, purges of calomel, with acescent drinks, must be given; leeches must be applied to the temples, and the jugular vein may be opened."

Lect. XI. *On Compression.* The usual symptoms are given, loss of sensation, and of voluntary motion, apoplectic stertor, slow labouring pulse, and one or both pupils dilated. Extravasion of blood, fracture with depression, and a formation of matter within the skull, are the three causes which give rise to compression.

When the brain is compressed by extravasated blood, the symptoms do not appear immediately after the accident; the person is first stunned, recovers himself, and a short time after falls into a comatose state, and then the apoplectic stertor begins. When extravasation is combined with concussion, the symptoms of concussion first appear, and the apoplectic stertor and other symptoms of compression succeed. Extravasated blood, producing compression, is met with, first, between the dura mater and the bone, "three ounces is the largest quantity I have ever seen effused in this situation." Secondly, between the dura mater and pia mater, and in this case a large portion of the brain will be found covered with blood; a small quantity being diffused over a large space. Thirdly, within the substance of the brain itself. Whatever is the situation of the extravasated blood, the symptoms of compression vary but little; "if there should, however, be any blood resting on the origin of a nerve, there will be partial paralysis of those parts which the nerve supplies.

In the treatment of these cases, there is little to be done but to deplete freely, for the purpose of preventing irritation and inflammation; the bowels are to be opened, and the patient kept very quiet. If there be a bruise, indicating the spot at which the injury has been sustained, you may trephine, after every other means have been tried ineffectually. If a fracture exists, and the symptoms do not yield to depletion, you will trephine to see the extravasation. If blood be not found between the dura mater and skull, do not puncture the

dura mater to seek for it; it is of no use, as the blood is coagulated and will not escape, and it is seated under the pia mater, or in the brain itself."

Fractures of the skull are not usually in themselves dangerous, but they become so by being united with concussion, or extravasation; "there is also a remote danger from inflammation." Fractures at the basis of the skull, are extremely dangerous, because they are generally united with extravasation. A blow upon the summit of the head, will sometimes produce a circular fracture, commmencing at the top of the head, and passing down on each side through the temporal bone, and meeting at the basis.

A fracture occasionally happens over the frontal sinuses; when it is simple, if the nose be blown, the air escapes into the cellular membrane, and renders the forehead emphysematous; if compound, the air rushes through the wound. Fractures of the skull, if unaccompanied with concussion or compression, become united as fractures of other bones, although more slowly. "Where large holes are made, as in trephining, the aperture is generally filled by a tendinous structure, formed from the dura mater, and united to the pericranium."

Treatment. "When there is fracture, unaccompanied with symptoms of injured brain, you will not trephine; but you must, by the application of adhesive plaster, endeavour to heal the wound in the scalp as quickly as possible. Let your constitutional treatment be that of depletion, by means of blood-letting and purgatives. This plan removes symptoms of concussion, and even extravasation, which accompany these fractures; and often a few hours will show you that the application of the trephine, which you at first might have thought indispensable, is rendered unnecessary. It is wrong, therefore, to decide hastily in these accidents; for irreparable mischief might arise from your making an incision, and converting a fracture, which was simple, into one that is compound."

Fracture with depression.—When blows have been received upon the head, the surgeon is apt to be deceived, and cannot be too much on his guard; it often happens, that upon examining the scalp, there appears to be depression of bone to a great extent, when in reality there is none. "A person receives a blow on the scalp: the parts immediately surrounding the spot where the blow was received swell from the extravasation of blood; but at the part on which the blow directly fell, the cellular membrane, having been condensed

by the injury, will not receive the extravasated blood; thus the surrounding parts are considerably higher than the middle; and the character of the contusion is certainly calculated to deceive those who are unacquainted with the nature of these accidents."

It often happens that considerable depression of bone will happen from the external table of the skull being driven into the diploe, without producing the slightest injury to the internal table; we should, therefore, not be too precipitate in our diagnosis, nor hastily determine on an operation.

"Suppose you are called to a patient who has had a severe blow on the head, and on examining the skull you find a portion of bone considerably depressed. You may still find this man capable of giving a history of the accident, and that his mind is not at all affected. On the other hand, you may be called to a person who has a fracture of the skull with depression, and who has lost the powers of his mind. If the fracture be simple, and there is no wound in the scalp, and no symptom of injury to the brain, it would be wrong to make an incision into the part, and perform the operation of trephining; for by making such an incision, you add greatly to the danger of the patient, as you may make what was before a simple, a compound fracture, and consequently greatly increase the danger of inflammation, which rarely follows fracture with depression, where the fracture is simple; but is a very frequent consequence of a compound fracture, which is produced by making an incision in the scalp. Never make an incision, therefore, when you can avoid it, or merely because there is a fracture with depression, if there be no symptoms of injury to the brain. Even if there be symptoms of injury to the brain, and the fracture be simple, do not immediately trepan. Take away blood, and purge your patient freely, and see how far the symptoms may be the result of concussion of the brain, and not of depression. If the symptoms do not yield to depletion, then, and not till then, perform the operation of trephining."

When inflammation of the dura mater and membranes of the brain has been excited by the depression of bone, "it will be too late to attempt to save the life of the patient by the operation."

The mischief of depression is not always immediate; the patient sometimes recovers from the first symptoms, but is thrown, by any hurried circulation, at a subsequent period, even after several months, into a new train of effects, which will ultimately require an operation. In cases of depression,

therefore, we should not be prevented from trephining, however distant the period may be at which the accident occurred, if there be no inflammation. Several highly interesting cases of this kind are related.

Lect. XII. *On wounds of the Brain.* These frequently happen without immediately producing any interruption to the mind. "But should the wound be accompanied by either compression or concussion, then the particular symptoms which characterize those injuries will be present. If, however, the wound be a simple incision or laceration, it does not produce symptoms until inflammation succeeds." Epileptic fits and hemiplegia sometimes follow; but brain to a great extent has been lost, without much disturbance to the mental or corporeal faculties.

It sometimes happens, when a portion of brain has been lost, that a piece of bone will, by being driven, occupy its place; if no symptoms of compression appear, the depressed bone must not be elevated, for was it done, it would in all probability give rise to extravasation, or increase the hazard of inflammation.

The danger of these injuries arises, 1st, from *inflammation*, which must be treated on the principles already laid down. 2d, From *fungus*; when the parts do not unite by adhesion, granulations form, which at length project through the opening of the skull and constitute *fungus*. The treatment of fungus is as follows, "you are to apply to the fungus a piece of lint, wetted by liquor calcis; and over this a strap of adhesive plaister; when you examine the part on the following day, you will find the fungus considerably diminished; you are then to use a thicker piece of lint, and the strapping as before; pursuing this plan, you at length bring the fungus to a level with the scalp; but this is not sufficiently low for your purpose; therefore, you must proceed until you have succeded in getting it on a level with the bone, in which position it must be cautiously preserved, when at last the scalp heals over it, and your object is accomplished. It is sometimes necessary to apply caustic to the fungus."

On the *inflammation of the brain*, which follows injuries, some highly valuable observations are made. If the membranes of the brain be attacked with inflammation, symptoms of irritation will be present, but if the brain itself be attacked, the symptoms will be those of compression. The time at which inflammation of the brain supervenes, after an injury has been received, is generally about a week; sometimes it does not come on till a fortnight or three weeks, and one

case is related, where it came on more than three months after the receipt of the injury.

"If the inflammation terminates in suppuration, the matter will be situated, either between the dura mater and skull, pia mater and tunica arachnoides, pia mater and surface of the brain; or, lastly, in the brain itself.

"When pus is situated between the dura mater and skull, trephining for its removal is attended with success; but it is comparatively rare there, as it is generally situated between the pia mater and surface of the brain, for which an operation will be useless.

"Another situation in which matter has been found, is in the longitudinal sinus of the dura mater."

Some observations follow on the operation of trephining, and the lecture concludes with some remarks on *wounds of the scalp.* Apparantly slight injuries of the scalp, have sometimes destroyed life; the cause of the danger attending such wounds, is the free communication between the vessels of the scalp and dura mater; as the vessels freely anastomase with each other, inflammation lighted up in one, readily extends its influence to the other. Incised wounds are less liable to produce deleterious effects, than lacerated and contused; although death has resulted from the removal of an encysted tumour in the scalp.

There are three modes in which wounds of the scalp prove destructive to life. 1st, By producing what is called, an erysipelatous inflammation. A man receives a wound of the scalp, slight dressing is applied, and the case is considered trifling; in a few days, the scalp becomes excessively tumid, and of a florid red colour; the face swollen; eyes closed by the tumefaction of the eyelids; great constitutional irritation; he then becomes comatose and dies with symptoms of compression. "Although this inflammation is said to be erysipelas, and is treated as that disease by giving bark, and other tonics, yet I believe both its cause and its treatment are mistaken; as far as I am able to judge, it is the result of tendinous inflammation of the occipito-frontalis, extending from thence to the skin of the head and neck, and that its treatment should be rather evacuant than repleting, as the danger results from the extension of inflammation to the membranes of the brain." 2dly, By exciting suppuration under the tendon of the occipito-frontalis: such abscesses should be opened early, to prevent the extension of the matter over a large surface of the skull. 3dly, "By incisions being made, to trace frac-

tures of the skull, producing in this way great aggravation of the inflammation, and extending its influence to the membranes of the brain. An incision in the scalp should, therefore, never be made but in cases of imperious necessity."*

LECT. XIII.—*On Injuries of the Spine.* The effects which arise from violence done to the spine, are very similar to those which are produced by injuries to the head; as, concussion, extravasation, fracture, fracture with depression, suppuration, and ulceration.

If a severe blow be inflicted upon the spine, or if it be suddenly bent, a paralysis of the parts below will frequently succeed, in a degree proportionate to the severity of the injury. If the parts be tender to the touch, or there is pain, bleeding, by cups and leeches to the part, should be employed, and the bowels kept freely open. If there is not much relief in the course of a week or ten days, a blister must be applied—the extremities should be rubbed with the liniment: ammoniæ; and, as sensation returns, electricity or galvanism may be beneficially employed.

Effusion of blood into the spinal canal, is comparatively rare. In one case, effusion between the theca vertebralis and the bone, was found to extend from the first cervical to the second lumbar vertebra, both included.

Fracture. The separation of one vertebra from another, is of very rare occurrence without fracture. When this happens, the parts of the body situated below the seat of injury, become paralysed. The symptoms according to the vertebra fractured, are next detailed. In fracture of the lumbar vertebræ, if the displacement be considerable, the patient may die in three weeks, but if slight, he may survive many weeks. The patient usually survives a much shorter period when the dorsal vertebræ are injured; although "I have known a gentleman live nine months after such an accident." Between the fourth and seventh cervical vertebræ, the patient seldom lives longer than four or five days, and in some cases, dies within forty-eight hours after the accident.

Fracture of a vertebra may take place without displacement, an instance of which occurred to Mr. Cline. A girl received a severe blow upon the neck; after which, whenever she wanted to look at any object, either above or below her, she always supported her head with her hands, and then gradually and carefully elevated or depressed it, according as she wished, towards the object. "Twelve months after

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* This concludes the first volume. The second commences with Lectur XIII.

the accident the child died; and, on examination, Mr. Cline found a transverse fracture of the atlas, but no displacement. When the head was depressed or elevated, the dentiform process of the second vertebra became displaced, carrying with it a portion of the atlas, occasioning pressure upon the spinal marrow, which was also produced by any violent agitation.

In the treatment of fracture of the spine, with displacement, no plan, hitherto adopted, has been productive of any permanent benefit.

Mr. Henry Cline, after numerous experiments, first attempted to afford relief by an operation, as he thought that these cases should be treated as those of fracture with depression of the skull. "He cut down upon the spine, at the part where the displacement was evident, and having exposed the spinous process and arch of the injured vertebra, he sawed through the arch near to the transverse process, with an instrument constructed for the purpose, and then raising the depressed portion of bone, he thus took off the pressure from the spinal marrow." It is well known that union of bone has taken place after fracture, with slight displacement of the vertebræ; "there can be no fear then as to the restoration of the part, *if the pressure on the spinal marrow could be removed.*"

It is only in cases where the spinal marrow is apparently little injured, that any benefit can ever be expected to result from this operation. Mr. Cline first performed the operation; in this case the spinal marrow and its membranes were completely torn through, so that a favourable termination could not be expected. Mr. Tyrrel has also performed the operation, and in a note details at length the history of the case, which also terminated fatally; his concluding observations are valuable. "My patient died of inflammation of his bladder, occasioned by the irritation of the urine, which, I believe, might have been prevented; and I should have taken steps for that purpose, had I then known some circumstances, of which I have since been informed, connected with Mr. Cline's experiments relative to injuries of the spine. He invariably found, that when complete paraplegia was produced by the injury which he inflicted on the spinal marrow of dogs, that the bladder became affected from the action of the urine on its mucous coat. This organ having lost its nervous power, it appears that the urine becomes decomposed in it, as it does after it is voided in the usual manner, and it then acts as an irritant on the mucous surface; this might

probably be obviated by frequently emptying the bladder by means of a syringe, and by injecting a mucilaginous fluid to protect the mucous coat.

"The immediate, although partial, return of sensation in my patient, and the after gradual increase of feeling, are proofs that the operation was in a degree serviceable. The patient also lived long enough to show that the effects of the operation upon the parts immediately concerned in it, are not sufficient to afford any ground for objection to its performance."

The operation has also been performed by two other English surgeons, and once in this city, by Dr. John R. Barton, at the Pennsylvania Hospital, with similar results. In the latter case we believe there was considerable displacement of the bodies of the vertebræ, so as to produce pressure on the spinal marrow; notwithstanding, after the operation, there was a return of sensation to a considerable extent. In the language of Sir Astley Cooper, "whether future trials will be more successful, it is difficult to say; we cannot speak decidedly on the subject, as the first operations have been unsuccessful. The proposal is laudable and the operation is not severe, nor does it increase the danger of the patient; time and experiment can only determine its value. If we could save one life in a hundred by it, we should deserve well of mankind; and if any good does ultimately result from it, Mr. Henry Cline has the merit of proposing it."

Suppuration and ulceration of the spinal marrow.—Sir Astley states that he has had but one opportunity of ascertaining this disease by dissection. The treatment required is to prevent inflammation by cupping or leeches; subsequently, counter irritation, by blisters and tartar emetic, will be useful; issues and setons may also, in some cases, prove beneficial.

(*To be Continued.*)

ART. X. *History of the recent progress of surgery.* By the CHEVALIER RICHERAND, Surgeon in chief of the Hospital of St. Louis; Consulting Surgeon to the King, &c. Paris, 1825.

THE great improvements in surgery of the latter part of the eighteenth and the commencement of the nineteeth centuries, in the different countries of Europe, is the subject of this history: It begins from the destruction of the Royal Aca-

demy of Surgery in 1792; and is written in a good style, but with all the partiality which the high idea entertained by the surgeons of Paris, have of their superiority over the rest of Europe: It is in fact more truly an account of the labours of France, than a general relation of those of the continent. The book came too late to enable us to add the discoveries of others, as fully as we could wish; as it is it will be found to be valuable. The text and matter of the author are freely used so as to give the substance of the book.

Trepanning.—The infrequency of this operation, at present, compared with former times, is considered as a proof of the advancement of the science of surgery: It has arisen from the circumstance that the cases are few in which it is positively indicated; for the fracture more rarely happens in the upper parts of the cranium, from the configuration of its bones transmitting the force to the base, which is of course inaccessible to instruments; and in those cases, where the fracture is accessible, the precise seat of pressure is difficult to be known; of course the cases which render it necessary are few: general means, or bleeding, evacuants, and blisters, when the place of effusion cannot be known, are resorted to: From the labours of M. Serres and others, in Paris, we are told, by our author, it appears, that when a clot of blood is thrown into the substance of the brain, it is surrounded by a layer of coagulating lymph, which effects the absorption of the fluid, and is gradually absorbed itself, its sides falling together and forming a yellow scar: nature herself therefore cures this disease by a resource unknown, says our author, to our predecessors: He then relates a case of depressed skull in which Beclard and P. Dubois operated at the anterior angle of the parietal bone. The patient had received a wound on the temple, was paralytic, and had convulsions on the side opposite to the wound: the middle artery of the dura mater, on trepanning, it appeared, had been wounded, and a large clot was found on the surface of the brain: it was removed and the patient recovered: he states that it established, besides, "that sensible signs in order to perform the operation of the trepan, are not always necessary; for in this instance the evidences were wanting, yet the application of the trepan confirmed the justice of the diagnostic, which was thus bottomed on the most perfect sagacity." The fact, that the artery of the dura mater can easily be stopped by interposing a dossil of lint, has long been acted on in this country; and in England, for many years; and as the stoppage of the hemorrhage, when operating above the longitudinal sinus, was long ago observed by Sharp, Garen-

geot, and others, this discovery, thus appropriated to Mr. Beclard, loses much of its originality. As the blow was on the temple, and as there were convulsions on the opposite side, sensible signs of the probable seat of effusion were not entirely wanting. The labours of Abernethy on this subject are entirely overlooked; the sign of the seat of effusion taken from scraping the bone; which does not bleed, if the dura mater be separated by a clot below is not noticed: nor is the valuable remark made also by Mr. Abernethy, that when blood is effused on the surface of the brain, it diffuses itself so as to render an operation for its escape nearly useless. These subjects have been examined with the greatest care in England, and it appears unjust to give the credit of them entirely to France. The removal, replacement, and reunion of the osseous disc after trepanning, by Dr. Walther, of Bonn, is not mentioned by our author.

Fistula Lachrymalis.—This chapter is short and desultory. The doctrine that the first stages of this disease originate from inflammation of the sac, prevails; the treatment of keeping open the passage by the button-headed canula is recommended; though the stricture, like all others, is considered as liable to return. The practice of Scarpa, of opening a passage into the nose by the actual cautery, is reprobated and referred to Cowper. It is stated that the celebrated surgeon of Italy in vain advocates the idea, that the disease originates from an affection of the mucous membrane of the lachrymal sac, and depends upon a morbid alteration of the os unguis. His practice and his principles in France, it appears, have shared the same fate; the doctrine that it proceeds from inflammation, is also attended with but little success, in its application to practice. The author then concludes this short article with the following dubious reflection: "Perhaps this affection has hitherto been regarded to the present time, in a point of view too exclusively mechanical, and the truth is to be found, as it often happens, at an equal distance from the opinions generally admitted, and those which it is proposed to substitute for them." So far from this affection being regarded as mechanical, from the time of Pott it has been considered as an inflammation, and the stricture as resulting from that state. The chapter throws no light upon the subject. The common operation, now generally practised, is preferred—the use of the canula.*

* Several cases of fistula lachrymalis have been cured by introducing caustic into the lachrymal canal, by Gensoul, of the Hotel Dieu; Beclard also has cured it by applying leeches to the exterior surface of the canal.

Operation for the Cataract.—This operation, it appears, is also surrounded by uncertainty amidst the different modes of cure. The mode of couching and of extraction, it is proposed to test by experiments deliberately made before some academy of medicine: the operation of keratonixis, or the penetration of the cornea with the intention of depressing and breaking up the lens, revived in 1806, by Dr. Buchorn, and by Langenbeck of Gottingen, at first sight appears plausible, from the circumstance that it is easier to arrive at the lens through the pupil, dilated by the application of belladonna, than by the old mode, penetrating the conjunctiva. Out of Germany, it is, however, but little estimated. Inflammation, and opacity of the cornea happen more frequently in this mode; it is true, the penetration of the cornea near its edge leaves the central parts clear, but the danger of opacity is still great.

Perforation of the Tympanum.—This operation was invented by Sir Astley Cooper, and is proper when the tympanum is thickened, thus preventing its vibration, or the Eustachian tube obstructed, the air then not being renewed; the vibrations fail to be properly transmitted to the internal ear; deafness is of course the consequence. The tympanum penetrated at its inferior part obviates this difficulty, and the patient hears.

The Taliacotion operation.—The author notices here the plan of forming a nose from the skin of the forehead, practised in India. The scar will always be an objection to it.

Salivary Fistula.—Under this head he notices a mode of treating this disease followed by Deguise and Beclard; the old method consisted in establishing an internal fistula, and keeping it open by a foreign body. Instead of continuing the exterior wound, they pierce the cheek obliquely with a trocar; after withdrawing it, they introduce a leaden wire; this they tie into a noose, which rests on the inner side of the cheek, and does not appear outwardly, in which it differs from the plan of Munro, and does not prevent the healing of the external wound.

In one case, was introduced into the orifice of the duct, a long flexible stilet of silver, very fine at one extremity, whilst at the other extremity it was larger, and drilled so as to admit a leaden thread, which was passed through a hole made in the cheek into the mouth; it was then tied into a noose; the external wound healed, and the patient recovered.

Staphyloraphia.—Or the union of the walls of the palate, which in cases of hare-lip are deficient; this operation is given

in another part of this volume of the Recorder. Mr. Graefe, of Berlin, is its author.

Bronchotomy.—The various papers published within a few years on this subject, in this Journal, give all that is new. M. Richerand's account of it contains no improvements. We add the following:

This operation has saved life in cases of infants, who had swallowed some hot water, which produced inflammation of the larynx, &c. Mr. Goodere, surgeon to the Clifton Dispensary, performed it on a patient who had a diseased larynx for four years, and who was in a state of trance when the operation was performed; a circular hole was made into the wind pipe, the air rushed in suddenly, and the patient revived; he wore a canula for six months, after which it was laid aside, and the patient was cured. Laryngeal Phthisis will no doubt be treated successfully by this operation, as is thought by Mr. Carmichael, of Dublin.

Penetrating wounds of the Chest.—The old practice of dilating penetrating wounds of the chest, has given way to that of healing them immediately, the credit of which is given to Mr. Larrey. This plan is used even when there is internal effusion of blood. Operations for the latter case are very rare; Sabatier is the only one in the time he flourished, who performed it with success. No instances are related in the Academy of Surgery, and the army surgeons of that day say that they seldom or never saw it performed. When there is a large quantity of blood in the thorax, Baron Larrey's plan of healing up the wound, we fear will not do. The uncertainty of the indications, which denote the effusion of blood into the thorax, often causes death from the nature of the injury not being suspected. It is therefore an operation which rarely can be required.

As the Academy of Surgery intend to award a prize in this year to the author of the best dissertation on the best mode of treating the wounds of the thorax: Baron Larrey's plan is hardly, therefore, to be considered as yet a discovery, the efficacy of which is perfectly demonstrated.

Invagination of the Intestines.—In wounds of the intestine, the introduction of its upper into its lower end, with a view of uniting it by producing adhesion of its sides, has not been generally successful. It appears, however, from a number of late experiments and researches which M. Jobert has verified to the academy, that, if in introducing the upper intestine into the lower, the precaution be taken to turn in the lower intestine upon itself, so that the peritoneal coat of the

lower end is in contact with that of the upper, we should thus facilitate adhesion by the approximation of structures resembling each other in nature; a result which would be impossible, if the peritoneal and mucous coats were laid together.

The turning in of the lower end upon itself, and the introsusception of the upper extremity, more easy in wounds penetrating the abdomen with a transverse and complete incision of the intestinal tube, than when the consequence of strangulated hernia with gangrene, would be facilitated by the immersion of the lower end in warm water, which produces a relaxation of the contracted extremity of the gut, and favours much the introsusception of the upper into the lower end. It is unnecessary to detach it from the mesentery to accomplish this, and there is no danger of hemorrhage. Dogs on which invagination has been performed, have been opened some months afterwards, and a simple thickening has been found at the point of union, with a sort of flat valve, which does not oppose the passage of the contents of the bowel.

Artificial Anus.—Towards the end of the year 1786, Desault taught that the cause of the obstacle to the healing of artificial anus, existed in the projection resulting from the opposition of the two ends of the divided intestine, opposing a sort of natural dyke to the course of its contents. He proposed to press back the acute angle formed by the adhesion of the ends of the gut, by a tent of charpie introduced within the gut by the external wound. Experience proved the success of this plan. It is also less dangerous than that substituted for it.

In the year 1798, a German, Frederick Smalkalden, proposed to divide the septum formed between the ends of the intestine, and which prevented the passage of the fæces from the upper to the lower extremity of the gut; to prevent danger in the use of this plan, it is necessary that the adhesion of the sides of the intestines should be complete, to prevent the effusion of the fæces into the abdominal cavity, which would otherwise take place. To divide the partition resulting from the apposition of the walls of the gut, Dr. Physick, our distinguished citizen, after passing a thread through the projecting part, then divides, with blunt scissors, from the projecting border of the partition to the point occupied by the thread, by which it had been previously traversed. The penetration of the thread for some days before the incision, renders certain the adhesion of the sides of the gut; it

can then be decided without danger. In 1812, Dupuytren effected the same object, by pressure on the partition by means of a pair of blunt and toothed scissors, for several days, and gradually effected the union of the sides of the gut, by inflicting on them a sort of contused wound, without any danger of peritoneal inflammation. It must, however, be observed, that in Dr. Physick's case, though the passage of the fæces was opened towards the rectum, the external wound did not heal, and the patient continued to be exposed to the evil of an artificial anus during the remainder of his life. In Dupuytren's cases, the discharge by the opening was also lessened, but not entirely removed.

Trusses.—With regard to trusses, he observes, that those adopted by the English, with a moveable pad at both their extremities, cannot be sufficiently deprecated. The pad in all trusses compresses the hernia with the more effect, if it be covered on its surface with a bladder filled with air, or is furnished with a spring placed in its interior, as practised by Juville. Trusses, with double pads, are essentially defective, because they do not act with effect on the opening, corresponding to the terminating cushion on the back. A double truss must be used in all cases of double hernia; i. e. with pads on the back, opposed to each opening. Where the truss is so made as to be lengthened and shortened in its spring, the mechanism can never be so well adjusted as to secure a uniform and proper pressure. The truss of Cowper as it exercises upon the whole circumference of the belly, and not particularly upon the weak part, though revived, is not approved. Another plan, in which the cushion is surmounted by another, smaller, which, by its pressure into the opening, keeps it open, is also not thought to be valuable. The cushion should exert an equal pressure on the sides of the opening, and thus compress it. It prevents the escape of the viscera, promotes the union of the opening, and the radical cure.

On Opening the Strictures of Hernial Sacs.—Of all the knives proposed for this purpose, that of Astley Cooper has the preference. It is shaped like a scythe, the cutting edge occupying one quarter of an inch near the end, which is terminated by an oval button. The shortness of the cutting edge, and the presence of the button, prevent the intestines from being wounded. M. Richerand then relates a case of a lady with a strangulated femoral hernia, which was buried in fat so deeply, that the incision was two inches and an half deep.

Without the knife of Cooper, it would have been impossible to perform the operation, which succeeded perfectly.

The division of the stricture in hernial sacs, he states, is not the result of a true incision, and it is necessary to take care that it be not made extensively. As soon as the knife touches the aponeurosis, which is stretched like the string of a bow, it tears like linen in the hands of the linen draper. The neighbouring arteries not being stretched, escape from the place of incision, and thus are not divided; on this account hemorrhage is rare, though the spermatic artery is so near. The structure of the different tissues, explains this result completely. If the incision is not conducted with the same freedom which we use in opening an abscess, notwithstanding the fears of Scarpa, the author states there is no fear of hemorrhage.

Fistula in Ano.—M. Ribes has proved, that the internal orifice of fistula seldom exists more than two inches, and more commonly, that it is found from two thirds of an inch to an inch within the anus. The old instruments, therefore, for operating on fistula high up, are superfluous. An ordinary bistoury, with a sound to direct it, only are necessary to perform this operation. It is not, however, always successful: and for two reasons—a disposition to consumption, which attends the disease, and imperfect dressings after the operation. It is necessary to keep a piece of lint between the lips of the wound during the first days after the operation, to excite in them a sufficient inflammation, and also, to prevent the union of the wound on the side of the rectum, before it takes place upon the side of the fistula. It should be gradually diminished, so that its sides should unite on the side of the passage of the fistula, and that the cicatrix should be complete on the side of the rectum.

M. Richerand mentions nothing on the subject of prolapsus ani. He seems disposed to pass over the improvement of Dupuytren, for curing this disease by cutting off some of the projecting folds of the internal coat of the rectum.

Strictures of the Urethra.—Thickening of the internal membrane from inflammation of the urethra, is the cause of strictures. Desault adopted the gum elastic bougies, as the best instruments for curing this disease; later experience, however, has found that they are defective. Strictures thus treated, are subject to relapses, and when the bougies are long in the urethra, they become excessively inconvenient, and at length, insupportable. Their results, also, are fever, discharge of mucus from the urethra, perforation of the sides

of the bladder from the point of the sound, acting for a long time on the bladder. Bougies of waxed linen are now again adopted. They dilate the urethra by a gradual mechanical action, and do not expose the patient to the danger of false passages, or tearing of the canal; for they become soft, mould themselves to the passage, and overcome great obstacles. A more expeditious mode, however, is desired by the patient, as well as the surgeon.

M. Ducamp believed that he could prevent the evils of the caustic, by passing down to it a bougie, charged with soft substance, which would take the impression of the irregularities of the passage, and thus expose the exact place to which the caustic should be applied; and then a canulated stylet, called a porte-caustic, is to be conducted to the obstacle by means of a straight canula: It cannot touch the rest of the urethra, but as the surgeon pleases, for by turning it between his fingers, he avoids the lateral perforation of the sides of the urethra, the accident most likely to happen. Some use the armed bougies of Home, instead of the porte-caustic of Ducamp. In the membranous part of the urethra, perforation of the sides is particularly probable; hemorrhages from the bulb, are so likewise. It is, therefore, only to the strictures of the spongy body that it can be applied. On this subject, M. Aumont is preparing a work, which the public may expect with interest.

The waxed linen bougies are more generally applicable to all kinds of strictures; the gum elastic to those in which fistulæ are combined, and finally the caustic to those of the anterior part of the urethra. In strictures, where obstinate retention of urine is the consequence, the point of a bougie fastened upon the extremity of a gum-elastic catheter, as practised by Dr. Physick, may here be mentioned as important, as also the use of the curved canula, concealing a lancet which may be protruded to divide the stricture, an improvement of the same great man. The treatment of strictures of the rectum is not noticed by M. Richerand: for an interesting fact on this subject, see Medical Recorder, vol. IV. p. 371, the relation of a case, in which, by means of a tin canula, the use of the bougie was facilitated.

Uninary Calculi, Lithontriptics, Lithotomy.—One fifth only of those who undergo the operation, recover after lithotomy. Solvents have therefore been sought after; acid and alkaline menstrua require time, and are rendered weak when injected into the bladder by the presence of the urine. Jules Cloquet has proposed pure water; which is injected into the bladder

at the temperature of 102 of Fahrenheit, and acts at length upon the hardest calculi. It is passed through a double sound, so that a stream is continually going into the bladder from a reservoir of a proper temperature, thus subjecting the stone to a continual stream, to the amount of several tons in a day without inconvenience. The person submits to it for several hours: The water may be conducted through tubes of gum elastic and the patient may lie in bed. This plan though it does not dissolve the stone, is found to be the best mode of treating catarrh and chronic affections of the bladder: a fact which, since the time of Jesse Foot and Desault, has been well known. Water acts slowly, and this is its greatest inconvenience, says our author; he might have added, its insuperable objection.

The project of Dumas and Prevost of Geneva for dissolving the stone by electricity passed through a double gum elastic catheter by means of wire requires two months to destroy a common stone; it therefore cannot be used. The dangerous effect of electricity on the bladder and the frequent introduction of instruments also oppose it.

Operation of Lithotomy.—A transverse, oblique, or lateral incision with respect to the neck of the bladder, gives (to pass over minor differences) a general idea of the division of opinion on the subject of lithotomy; as the disputes have arisen on the subject of the direction of the line, in which this incision should be made. The lateral mode has been of late employed; and the difference among modern surgeons has been solely upon instruments—either the gorget—the lithotome caché—or the bistoury variously modified: M. Chaussier, in 1805, revived the mode of Celsus by the transverse incision: which Beclard has since practised with the greatest success: A new mode of performing the transverse operation has since been brought to light, and practised with various result: MM. Ribes and Chaussier conceived that the old method of extracting stones from the bladder by a transverse incision without a conductor, wanted but this addition to render it complete; this operation was exclusively practised to the 16th century: the apparatus major of Marianus Sanctus displaced it, till the lateral operation improved by later times came into general favour.

The transverse method of Celsus, and the vertical mode, has been brought forward in 1818, by Dr. Sanson, with this difference, that the incision is continued to the bladder, not only endangering the rectum, but with the professed intention of dividing that intestine. This operation, divested of its

useless accompanyments, viz. the laceration of the neck of the bladder and urethra, as practised by Marianus, should consist of an incision of the prostate alone, barely grazing the anterior part of the sphincter, for fear of producing incurable and mortal urinary fistulæ. It is true that surgeons have recommended the free division of the rectum, and the bottom of the bladder, so as to establish a free communication between them: operations which involve this effect have entirely failed in Paris, though so much praised in Italy: urinary fistulæ have invariably marred their success. This mode of operation can succeed only in children, where the stones are small and the rectum is not divided. It is here worthy of remark, that it is upon young subjects that the innovators of this operation have attempted to found their projects, since the general success of lithotomy upon young subjects is always favourable to them: the mode of Celsus, therefore, practised without the aid of a conductor, succeeds well in young subjects, even without a knowledge of anatomy: why then does not this operation, directed by a thorough knowledge of the parts, succeed as well now as it did in the hands of our predecessors, who were confined to this method alone, till the time of the introduction of the apparatus major, previous to the sixteenth century?

This reflection turned the attention of Chaussier and Ribes in 1805, to this important subject; when they published the result of their researches, on the best mode, viz.

The patient is placed and prepared in the same manner as in the lateral operation; the catheter being introduced, the operator placing the three fingers of his left hand upon the anus, to depress it on the side of the coccyx, takes a scalpel with a long handle and a convex edge, and carries the point of it upon the right side of the perineum, nearly an inch from the raphe, and almost half an inch above the anus, then cuts transversely, and having arrived at the left of the raphe prolongs the incision a little obliquely and directs it thus on the side of the ischium, in order to give it the form of a crescent, as Celsus describes. The first incision being made deeper, the urethra is seen and then cut; the prostate and the neck of the bladder is then divided on both sides; either cut right and left by a scalpel or by the lithotome caché, with a double blade, after the plan of Fleurant.

With regard to the success of this method, it is only necessary to consult the experience of Raw, who continually advised the reading of Celsus (Celsum legitoté), when he was consulted on his mode of performing this operation; which

he kept secret. This operator of fifteen hundred patients did not lose one, whilst Cheselden, Lecat, and others who brought the lateral operation nearly to perfection, lost about one twentieth of those they operated on.

M. Boyer, by using the lithotome caché, has united the advantages of the lateral and transverse operation to a certain extent, in his mode, which is as follows: before opening the instrument introduced into the bladder, he turns it to the left so as to cut transversely the neck of that viscus as well as the prostate; then he returns the blade into its sheath, and draws back the instrument, following the oblique direction of the primitive incision. This mode has the double advantage of making a large wound of the neck of the bladder so as to render the extraction of the calculus easy, and without endangering the vessels by making a large external wound. To enable the stone to pass easily it is necessary to divide largely the neck of the bladder; and if we fear the division of the pudic artery, so annoying in this operation, by carrying too far the cutting edge of the lithotome directed transversely outwards, it is easy to cause the blade to return to its scabbard, and to turn it from left to right to effect transversely the incision of the right side of the neck of the bladder and of the prostate, which envelopes it.

This plan has succeeded most perfectly in the hands of M. Richerand; a stone of three ounces was extracted by it, without the least difficulty: the direction of the internal wound compared with the exterior in this mode compressed as the parts are in extracting the stone, differs little from that in other plans of operation. Here it may be proper to state, the valuable improvement of Dr. Rhea Barton, of this city, in the forceps; it consists in reducing the size of the blades so as to admit of the easy extraction of large stones.

The operation of lithotomy above the pubis, has also been brought to great perfection in Paris. So many circumstances, however, are necessary to estimate its comparative success, that the author does not pronounce upon its efficiency. He then speaks of the plan of the Arabians, of distending the urethra and the bladder by inflation; the reduction of a stone to powder, by Colonel Martin by means of a file introduced into his bladder, and lastly, the proposition of Dr. Grothuisen, in the Saltzbourg Gazette, for 1813, to destroy urinary calculi by lithontriptors. He then introduces the project of Civiale, in 1817, of which we have given a full history in a former number, and the report of the author himself for February, 1825. The use of the forceps of Weiss by Astley Cooper,

for dilating the urethra, and extracting small stones, is passed over in the most profound silence; though he notices the practice of inflation for the same purpose. The project of M. Campana, of taking hold of the stone by the largest diameter in extracting it, is also unnoticed; and also the recto-vesical operation proposed by M. Sanson.

Hydrocele.—The plan of injection is preferred.

Aneurisms.—This chapter commences with the well-known history of the progress of the use of the ligature. The discovery of a needle for tying deep-seated arteries, invented by Physick, Parish, Hartshorne, Hewson, and first by them applied to this purpose, may be here noticed: it consists of a needle, held in a curved forceps, by which the ligature is passed below the vessel. The use of buckskin ligatures also was proposed, by Dr. Physick, in 1814. The idea of animal ligatures, however, is not a new one, as represented by the friends of that great man; since silk is nothing more than a substance of that nature. It then details that of varicose aneurism, of which he gives a curious case, which proves, I. That when the communication between the artery and the vein is large, the whole of the blood instead of going to its destination in the limb, passes through the aneurism, so that the limb decays for want of nourishment. II. The artery, in such a case, should be tied both above and below the aneurism. The veins in this instance also had approximated in their structure to that of arteries.

He then proceeds to relate the history of nævi materni, and the treatment of varicose veins by dividing them by a simple incision, of which he claims the discovery. The tying of the arteria innominata, first practised by Dr. Mott, of New York, might be here mentioned as due to North America. Graefe followed it in Germany. Both patients died. Dr. Mott's lived sixty-eight days. The tying of the thyroid artery, by Professor Walther, for bronchocele, which he considered as aneurismatic is also unnoticed. The treatment of nævi materni by inoculation with the vaccine virus, as mentioned by Dr. Burkhardt, and by which many cases have been cured, is passed over with the most profound silence. The tying of the spermatic veins and artery has been successfully used by Dr. Brown of New York, for the cure of varicocele, The same operation performed on the spermatic artery alone, by Dr Jameson, of Baltimore, is more valuable, because it does not endanger inflammation of the vein; the aneurism of the carotid artery has been cured successfully by tying it above the tumor, by J. Wardrop, an English surgeon.

Fractures.—In the time of Desault, mechanical inventions were the fashion; now, position and rest. Like Archimedes, who thought his machines, which so ably defended Syracuse, unworthy his attention, and beneath his mathematical dignity, however complicated and useful, French surgery seems disposed now to reject all these aids as ragamuffin trumpery, which more properly belongs to a little surgeon bleeder, who sharpens out his wits at all points, and spreads himself into as large a space as possible, to gain business, by a charlatanical exertion of that commonest of all talents, mechanical skill. Mr. Amesbury, though he makes his patients rise from their beds in a day or two, of course, with these gentlemen, has no merit.

Fracture of the clavicle.—To support these views, a poet, Legouvé, broke his clavicle, and did not get well for six months after the bandages were removed, from the stiffening effect of the surgeon and his bandages upon the ligaments. Since then our author has applied his skill to the cases of some young ladies, whose beauty nature had so happily moulded, that Desault's bandages would not stay on, and these ladies recovered perfectly with only a simple piece of lint put below the armpit, to detain the perspiration; no relics being left of the surgeon on their systems, they recovered themselves directly. Our French brethren, we fear, are a little upon extremes; their ideas are hardly sufficiently settled since the piping times of Louis Quatorze, not still to preserve that contrary disposition of character, which has always thrown them out of the medio tutissimus, and made Voltaire say they were either tigers or monkeys, and he might have added like nothing either in heaven above or the earth beneath, for this dancing people truly, as has been happily said, live between them. Their science sometimes partakes of the same mobility.

Fracture of the Femur.—Repose and position succeed best in these fractures. In those parts surrounded by the capsular ligament, nature supplies the place of a retaining apparatus. To overcome the resistance which the thick external capsular ligament opposes to displacement, muscular contraction would be necessary: pain opposes it. This fracture, according to our author, should be treated by placing the limb in a state of semi-flexion, of the thigh upon the pelvis and of the leg upon the thigh, keeping them in that position by a cushion placed below the ham, and with bandages placed before and around the inferior part of the thigh. These bandages are made with napkins folded into several doubles,

about four or five inches broad, are attached, on both sides, to the lower sides of the bed; they serve to prevent the involuntary movements of the limb, and in sixty days the patient recovers. This is the plan of Pott, and is followed in the London hospitals. The object of the ordinary apparatus for treating fractures of the thigh is confined entirely to retaining the limb in a state of immobility, and the repose of the parts is proportional to the distance upwards, which the anterior and external splints extend; so that the little mats of chaff placed below them, encase, in some measure, the thigh at its upper part, so as to prevent, as much as possible, its motion.

The double or permanent extension produced by bandages and splints, he thinks, is of no account; because it requires a force which is intolerable, to make the extension be felt as high as the joint of the hip. The excoriation and ulceration of the ankle and perineum also interfere with it, and the result of the plan of Desault is, accordingly, either the shortening of the limb, or the turning of the knee and foot outwards. It is impossible to discover, when the patient lies upon his back, whether the limb be shorter or not, as the slightest motion of the pelvis makes the two legs appear equally long, the heels being brought to a level by the slightest motion of the pelvis, the superior anterior spinous process still not appearing in the least inclined. Limping only discovers the defects of treatment, and when it is too late. The plan of Desault, therefore, has entirely given place to that of Pott, by flexion of the extremity; which, however, is generally followed by a slight shortening of the limb, an evil not so much to be dreaded as the turning out of the toes in Desault's plan, and easily remedied by thickening the sole of the shoe or stocking. According to the plan of Dr. Physic, which consists in increasing the length of the splint, so that the counter-extension is more in the direction of the thigh, these difficulties are obviated. Dr. Hartshorne's invention, too, in which the extension is made by a splint placed on the inside of the thigh, its upper end being well padded and pressing on the perineum, and its lower end extending below the foot, makes the extension without these disadvantages. We have seen many instances of perfect cure without the least deformity by both these plans. The improvement also of Dr. Archer deserves attention; by it the extension is made in a more direct manner, (see Med. Record. vol. vi. p. 288,) and without the necessity of a counter-extending band in the peri-

neum. The attachment by a bandage, of one leg and thigh to the other, has been proposed by Mursinna, a mat of chaff being interposed between them to obviate friction against each other, particularly at the knees and ankles. This plan, however, does not prevent the turning outwards of the limb.

Fractures of the patella.—Position and rest are the principal means used in France to cure these fractures. The extended extremity is raised so as to form an angle with the body. It is supported and kept immovable in this position, which prevents the separation of the fragments, because the action of the extensors is at its maximum. The bone must, however, be most solidly united before the person attempts to move.

Fractures of the neck of the Humerus.—The ancient plan of treating this fracture, by bringing the arm to the side, requires only the additional indication of opposing the action of those causes of displacement, by giving the arm a position favourable to that intention.

The superior fragment is drawn outwards by the muscles; the superior end of the inferior fragment is drawn inward by the pectoral, latissimus, and teres major: if the elbow be brought inwards and forwards, so that the hand of the affected side, the fore-arm being more than half bent, applies itself to the shoulder of the well side, the trunk serves as a splint: the upper end of the inferior fragment directed backwards and outwards is carried so as to meet the superior fragment: the muscles are relaxed: a compress placed below the arm-pit absorbs the humidity without exercising any disagreeable pressure, as a cushion would do: a few turns of a bandage round the elbow is sufficient to retain the arm in its situation: it is united in twenty-five to thirty days. This is given we suppose as nothing new, but as the plan now used in Paris.

He takes no notice of fractures of the lower end of the humerus. The plans of Mr. Amesbury, by which the splints are so adapted as to form a solid case on the exterior of the limb, and still preserve the motions of the joints and thus prevent their stiffness, commonly as great an evil as the original fracture, are also passed over.

Fractures of the Leg.—Dr. Sauter suspends the leg in a sort of hammock by cords from the top of the bed: the leg treated in this mode is in danger of falling out of the hammock during sleep.* When the ordinary dressings are used,

* The plan of Dr. Hutchinson, in which the counter-extension is made by

i. e. that of Scultet, with splints and bags of chaff, the leg laid upon a large pillow neither suffers fatiguing extension or compression. In raising the lower part of the member, this plan of sustentation determines the gemiflexion of the knee and of the thigh on the pelvis.

He then notices the treatment of fracture of the fibula combined with rupture of the ligaments, the consequence of suddenly turning the foot inwards: of the plan of treating it by Dupuytren an occount has been given in the Recorder in a former number, vol. IV. 368.

Means used to prevent deformity.—The author condemns the plans supporting the body by inflexible levers attached to the back or pelvis, supporting by cross bars, the shoulders or head; but recommends the horizontal position with occasional changes to the erect one by chairs, which will completely remove the deformity of the spine, and reestablish the constitution. This is perfectly accordant with the best experience of this country: when the bones are diseased, these bandages and supports are useless. Dr. Physick relies upon purges every day; a plan which he has the merit of introducing: It is sufficient of itself without the assistance of the plans of counter-extension, and succeeds perfectly in the hip disease of children.

These plans may be assisted by machines to stretch the body, by being applied to the head and pelvis: to render this effectual, it is necessary that this extension should be made upon large surfaces and discontinued by intervals. It may be applied to the head by a leather helmet or a thick bandage embracing the occiput and the lower jaw, in the form of a collar; or in a thick bandage put round the haunches, by means of which the pelvis and head are drawn in opposite directions.

Mechanical beds formed on these principles vary with the genius of the inventor: these plans succeed completely if the ricketty disposition is not too deeply laid.

The great objection of all plans to support the body, is the unnatural confinement it gives to the breast, by the bandages prohibiting exercise, and the inadequate support it gives to the system. The horizontal position assisted by extension, performed either by mechanical contrivances fixed to the ends of the bed, or gradually stretching it, and thus assisting the dispositions of nature, fulfills every indication, generally effects a cure, and is the one most relied on.

a band passing below the knee, the splint being made upon Desault's plan, might here be noticed as an American modification.

Club Foot.—From the sides of a metallic sole upon which the bottom of the foot rests and which turns up above the heel, there arise two vertical projections, of which the superior extremities are fixed without and within the knee by a thick garter: the machine is fixed to the leg without disagreeable pressure. The foot of the infant being fixed in this apparatus, the elastic pieces tend to keep it in its natural direction; to assist it at first, it is necessary that the patient should not be permitted to use it: as plates do not describe exactly this plan, it is useless to attempt it by words. Every attempt to bring the distorted limb to its situation must be done gradually as deformities which require years to form, also require a long time to cure them: and it is also necessary to their success, that the parts should not have become absolutely bony.

The amputation of the Joints in case of caries of these parts.—The amputation of the joint of a carious humerus was affected by White, in 1769. Since then it has been extended to other articulations, to the knee, the wrist, and the ancle: it applies, however, only to the superior limbs, particularly to the humerus. The structure of joint of the wrist is such that amputation of the limb would be preferable, as the joint would be destroyed or the complicated movements of the hand much injured; at the ancle, it would produce lameness; at the knee, the inflammation is too extensive to bear: confined to the humerus it is a real addition to surgery, and more particularly in its commencing stages, as the weakness of the patient, and the terror inspired by the operation generally forbids it. Some remarks follow on the use of the seton in non-united fractures. He gives the credit of this discovery to a surgeon of Philadelphia (Dr. Physick), and Percy of Paris. The late improvements on this subject are well known to our readers.

Amputation.—With the exception of the immediate reunion of the divided soft parts, there has been no innovation in respect to circular amputations practised on the continuity of the bones: at the joints, important modifications have been introduced. His account of these are familiar to our surgeons; it consists of the various modes of operating now practised in Paris by different surgeons, particularly Lisfranc.

*Extirpation of Cancers.**—Cancer generally reappears after

* Inflammation and its treatment, finds no place in this treatise: the artificial leeches, and the improvements in raising leeches, might have been mentioned: the application of caustics to whitlows, as the speediest mode of relieving them, is an observation of one of our countrymen, Dr. Perkin: compres-

extirpation. Boyer, as well as Munro, states that they are generally followed by a return. The author, out of three hundred operations, performed either upon the breasts, the testicles, the penis, or the lips, states that he can cite but a small number of cases which were successfully cured. Certain cancers, however, form an exception to this general rule; these are the encysted, and also those which are superficial, as of the skin or the mucous membranes preceded by a degeneration of the subjacent structures. The sac in encysted cancers preserves the surrounding textures from partaking in it; where it has ramifications, it is generally incurable. This is particularly the case where it involves the face and jaws; the deaths of more then thirty patients have been hastened in the Hotel Dieu with this form of disease, within twenty years: no one has escaped. The extirpation of the lower jaw, in two cases of cancer adherent to that bone, have met with a speedy death in the Hospital of St. Louis, from the operation. One patient with a fungous cancer, in which the integuments were sound, and the actual cautery has been used, has been saved. It is only, therefore, when the local affection is not extensive, and there are no constitutional symptoms present, that it should be attempted. The extirpation of part of the jaw, has been performed by Drs. Mott, M'Clelland, Simons, and Batchelder, in this country: as far as the result of the cases are known, death has followed. This operation, in the opinion of our most judicious men, should not be performed: the same thing is thought generally of taking up the carotid.

sion by bandage, has been tried by Dr. Batchelder, a professor to the north, with success in this disease. The use of the mercurial ointment in erysipelas, might also be mentioned, introduced by Drs. Dean and Little: the salivation, induced by it, renders it inconvenient: the lard, I have ascertained, is the active article; it succeeds most perfectly in curing this disease: sweet oil does so also, but not so speedily. The treatment of wounds on dissection, might have been noticed, as a subject in progress; of venemous reptiles, for which alcohol appears to be the best remedy. The application of leeches to the inflammation of the internal fauces, by Dr. Crampton, of Dublin, might also have been mentioned. The introduction of sulphureous fumigations, in diseases of the skin; the removal, by the knife, of the whole of the cicatrices of burns, to prevent the contraction of the limbs, as discovered by Mr. Earle, of London, is also passed over: the introduction of vaccination, may be thrown under the head of surgery, as it consists in exciting a specific local inflammation: new views on the pathology of Burns, by Mr. Hayward, proving that death, in this case, results from internal local inflammations: the cure of burns, by the application of spirits of turpentine, by Mr. Kentish, of England: and the treatment of ulcers, by adhesive straps, by Mr. Baynton, are all passed over.

The cancers of the lips he proposes to extirpate with a scissors, with short, strong, and curved blades; removes them generally at one stroke, and the wound, from the extensile character of the parts, is as smooth as when it is made with a knife. The arteries are tied in the usual manner; the wound sprinkled with a little agaric, to stop the bleeding; lint compresses, and a bandage, complete the dressing. Little deformity is the consequence.

Cancers about the lower jaw rarely arise from the bone; though they do sometimes. When they do, the diseased part of the bone should be cut out. The actual cautery produces a burnt surface, followed by a slow exfoliation; if the bone be scraped, though the greater part of it be removed, the cancer reappears from every part of its surface. When the cancer rises from the alveolar part of the jaw, is confined to the bone, and does not affect the surrounding textures, the soft parts on the body of the jaw, opposite to the tumour, should be detached, by a longitudinal incision, which descends from the free border of the lower lip, to the level of the projection of the thyroid cartilage. To isolate completely, the diseased bone, the membrane of the lip is divided within; the mulo-thyroid muscle, which alone is attached along the internal face of the bone, is the portion which is to be removed. A piece of pasteboard is slipped in below, then with a saw, the quadrilateral portion from which the tumour takes its origin, and the remaining portions, are approached and adjusted; the flaps of the soft parts are brought over, united with sticking plasters and by a bandage. If the soft parts are not so diseased, but only the bone, the operation succeeds. It is performed in the above manner, by the great surgeon Dupuytren.

If the soft parts, and a considerable portion of the jaw is diseased, the extremities of the bone after the operation, cannot be approached. A wasting suppuration takes place, the saliva cannot be retained, the patient can only live upon soup—deglutition being impossible, he at length dies.

The author then gives the detail of a case of cancer, and his operation; in which he cut out two of the ribs, which, he says, despising the danger of opening the pleura, he would again practice for any other disease than cancer. As the glands between the ribs are often diseased, this operation must be objectionable.* He proposes also to open the

* See Med. Record. p. 13. Vol. II. Remarks by Dr. Batchelder.

pericardium by an incision, in dropsy of the pericardium, and expects that it would cure itself, by adhesive inflammation taking place between the sides of the heart with the pericardium; as these are operations which no man in his senses would undertake, we pass them by.

M. Aumont performs the operation for extirpation of the testicle, by raising the scrotum; and opening it by a longitudinal incision, avoids the scrotal arteries or external pudics —the pus escapes easily. He makes the ligature round the cord so tight, as to disorganize in a moment the nerves, to prevent the irritation produced by a moderate pressure, extending upwards, and producing an abscess in the iliac fossa. The operation performed in this manner, is shorter, and the cure more rapid. If there exist adhesions, and the fistulæ of the scrotum which follow them, a double incision is necessary to remove them.

The cauterization of the neck of the uterus, has been preferred in France, to extirpation.

He believes that this operation has been performed on cases of simple inflammatory engorgements of the viscus, and in cases of fungous vegetation, which occurs in women whose menses have ceased, explaining the causes of success.

Touch alone is not sufficient to ascertain the engorgements; the hardness and the ulceration of the os tincæ, lancinating pains, red sanies, are also not sufficient evidences of cancer; it is necessary to see the diseased part. For this purpose, a large tube of polished tin is necessary; the reflection from its sides enables the part to be seen with ease, when a light is placed at its open end, which is in this place twenty-two lines in diameter—at its other extremity sixteen, so as to receive the os uteri.

The speculum, previously greased, is introduced, the woman being placed as in artificial labour; it is held by an assistant; caustic may be applied, and the parts washed thoroughly afterwards by injections, and by repeated operations, the whole os uteri may thus be destroyed. This operation, however, appears entirely objectionable, from the circumstance that it is impossible to discover how far the cancer extends, and if it be cancerous, it is generally incurable. The operation of Osiander, by which the uterus is drawn down and cut off, has not the inconveniences of repeated irritations, as the above.

On some other Surgical Improvements.—An habitual contraction of the sphincter ani, which opposes the passage of the fæces, is attended with great pain, and is relieved ac-

cording to the plan of Mr. Boyer, instantly, by dividing the muscle thus affected; opiates, baths, and dilatation, are useless. It originates from superficial ulceration, or fissures near the anus. The author then mentions the revival of the operation of Celsus for the stone in women, which was to make an incision between the urethra and os pubis, and thus avoid the pudic artery, and the danger of urinary fistulæ, which follow the ordinary mode, by cutting the urethra laterally.*

The cure of these fistulæ seldom succeeds by the use of a speculum open at the side, and the actual cautery applied to their openings. The stillicidium of urine is constant. Perhaps a syphon, which would draw off the urine from the bladder as it is deposited there, and force it to pass by the canal, by a large sound of gum elastic placed in the urethra, would prevent the liquid from passing by the fistula; more particularly, if by filling the vagina with lint, it were compressed. This experiment has been tried, but the result was imperfect. The cure of these fistulæ in Edinburgh, by irritating them with cantharides, has succeeded; in London, lately, by uniting them with ligatures by a peculiar needle, described in the Analecta of this number. The union of the lacerated perineum has been effected by Mr. Alcock, surgeon, London, by the use of ligatures, immediately after the accident.

It is true, that Frere Cosme thought the consequences of the operation upon women below the pubis, so bad, that he always was induced to use the high apparatus.

Nothing is mentioned of the terrible operations for the extirpation of the ovary by Dr. M'Dowal and Dr. Alban Smith of Danville, Kentucky, by Dr. Smith of Yale College, due to America; of other operations performed on tumours of the abdomen, by Lizars of Edinburgh, by Marechalt at Sedan, by Cayroke at Mendes, and by Smith of Yale College, in this country; these, though not new, deserve notice among the great enterprises of surgery.

An ingenious mode, by a physician of Kentucky, of extracting a fish-hook from the stomach, which had been accidentally swallowed, may be here mentioned. The line to which it was attached, hung out of the mouth; as the hook was small, a hole was made through a rifle-ball, the line was passed through it, and dropt into the throat, which was

* An operation for extracting the stone from women, by Lisfranc, is described in Vol. VI. of the Medical Recorder, p. 579, which is slightly referred to by the author.

instantly swallowed; the hook was then drawn up, the ball protecting the œsophagus from the point of the hook.* The extraction of poisons from the stomach by a syringe and tube, first practised by Dr. Physick, and since by Dr. Jukes, of London, is a great improvement, upon which our author is entirely silent.

The cure of polypi of the nose by the use of snuff, by Dr. Townsend, of New-York, also the application of other articles of the materia medica, as laudanum, white vitriol, for the same purpose, may also be noticed as facts of some utility; also the use of the seton, by Dr. Quadri, of Naples, for the treatment of goitre. The use of transfusion of blood, (a surgical operation certainly,) in supporting life in cases of uterine hemorrhage, is due to Dr. Blundel, of London. The division of strictures of the rectum, as practised by Dr. Jameson, of Baltimore. The use of mechanical pressure on the head, by Sir Gilbert Blane, of London, to cure hydrocephalus, and of ligatures tightly applied round the limbs for the relief of difficulty of breathing in nervous habits, by Dr. Franz, of Lissa, in Bohemia, though instances of the cure of diseases which come under the care of the physician, may be here mentioned as treated by mechanical means, and therefore deserve to be placed under this head. The cure of sarcocele, by M. Maunoir, of Geneva, by tying up the spermatic artery. The application of the magnet to the relief of tic douloureux, a disease sometimes cured by a surgical operation, by Dr. Alibert, of Paris, may also be mentioned. The revival of the old remedy of caustic applications to carbuncles, supported by Blackadder, Physic, and Harlan. The extraction of large coagula of blood from the bladder, by a syringe, by L. Byron, Ireland. The revival of acupuncturation as a remedy in various diseases, of which local inflammation forms a part. The operations of Dr. Jameson, of Baltimore, for stricture in the urethra and retention of urine, which consist in cutting into the perineum, and dividing the accelerator urinæ and levator ani, which assist in compressing the urethra. An operation for the cure of imperforate anus, by J. R. Barton, in which the usual opening into the vagina existed; the operation consisted in slitting the vagina and rectum into one, and keeping the rectum open till the vagina completely healed up, leaving the rectum open; it succeeded most happily. The use of tapping in the cure of staphyloma, by Dr. Martland, of Scotland, deserves to be

* Med. Record. Vol. VI. p. 581.

noticed. A fork has been extracted from the stomach, by Mr. Renaud, of Romans, (France) and with success. Dr. Physick has removed the uvula and cured an obstinate cough which often terminates in phthisis. Dr. Horner has proposed a new mode of treatment for a disease of the eyes, founded on the tensor tarsi muscle. An instrument for extracting the brain of the fœtus in difficult labours, by Alexander Stevens, of New-York: An effectual plan of operation in amputation for securing a complete cover by the soft parts after union, by Dr. Smith, of Yale College: The suppression of inflammation in large joints, by taking up the artery of the limb, by Dr. Mott. of New-York, deserve to be noticed. The removal of a portion of a varicose vein, by Dr. Hartshorne, of this city, instead of simply dividing it as practised by Brodie; a new instrument for dilating the female urethra, by Sir Astley Cooper, for the purpose of extracting stones from the bladder; an instrument for applying pressure to a dropsical ovarium, without deranging the circulation, has been invented by H. Searle, London, and successfully applied, Dr. Jameson's instrument and plan for treating strictures of the œsophagus; the cure of hydrocephalus internus by puncture, proposed by Munro and tried successfully by several British surgeons, may also be added. Dr. Jameson's improvements in the operation of lithotomy: The project of M. Aumont for facilitating the passage of stones from the urethra, which are impacted in it, by introducing a gum elastic tent as far as the stone, the urethra dilates and the stone comes away; also the removal of gravel in the urethra, by suction, through a tube introduced down to the gravel, by surgeons in France: The various mechanical contrivances invented for fractures by surgeons in all parts of the world, which are unnoticed by M. Richerand, and the improvements of Dr. Jameson, of Baltimore, in the operation of lithotomy, might also be added: Likewise the invention of a small scissors for cutting up the cataract, by Dr. Gibson, of this city; also one for the same purpose, by Hill, of South Carolina. We have, no doubt, omitted many improvements, in this country and in Europe, but the late arrival of the book must be our excuse. We should be glad to hear of any inventions which we have passed over in the above sketch: they will be noticed in the next number.

ART. XI. *A Treatise on the properties and Medical Application of the Vapour Bath, in its different varieties, and their different effects in various species of diseased action.* By J. GIBNEY, M. D. of the University of Edinburgh: resident physician at Brighton, and senior physician to the Sussex County Hospital, and General Sea-Bathing Company. London, 1825. Knight & Lacy.

WITHIN a few years, the attention of the Medical profession, has been directed to the investigation of the effects of different gases and simple or medicated vapours, applied to the respiratory organs and external surface of the human body. These inquiries, which have been pursued with much diligence, and the numerous improvements developed in their progress, leave no room to doubt of the importance and fruitfulness of the subject. It is now about the time when we might reasonably expect from those who have been engaged in making observations, the fruits of their experience; and accordingly, Dr. Gibney, of Brighton, who is already advantageously known by his treatise upon baths in general, has favoured the public with the information his very advantageous opportunities have enabled him to collect and embody.

His work he pronounces, a *compilation of facts and observations*, selected and arranged, with due reflection, and after his own manner, with a view to render the subject it treats of, better understood by practitioners. A daily inspection during many years, of the powers and influence of the vapour bath, upon the great variety of diseases, which one of the most celebrated watering places in England presents, appears to have confirmed him in the opinion of its superiority in most instances, over the usual mode of bathing. He regards it as a much more *powerful* agent, than the common fluid bath, under any degree of heat, and, therefore, very properly concludes, that its administration calls for more prudence and circumspection. He lays no claim to originality, as regards the principles upon which vapours and gaseous substances are applied to medicinal purposes, and gives an interesting retrospect into their employment even in the days of Hippocrates, and afterwards successively by Celsus, Galen, and the Arabian physicians, but more especially among the inhabitants of the East, the Egyptians, Greeks, and Romans, by whom they have been employed both generally and topically, from the earliest times to the present day. Even among the frigid countries of the North,

the practice has long been held in general estimation, and the vapour baths of Russia, Finland, Sweden, &c., are so universally resorted to as the promoters of health and comfort, that in some parts of those countries, a strict preclusion from them is used, and considered as a punishment of considerable severity. Should an Egyptian husband place such an interdiction upon his wife, the measure would be regarded so cruel, as to subject him to general disapprobation. All this proves the common use and high estimation in which the application of simple or medicated vapours to the body is held, and makes it appear not a little singular, that an agent so extensively known, should not have been resorted to, until lately, by the most enlightened nations in the world. Even in our own country the practice is pointed out, if we may be allowed the expression, by nature herself; since it enters into the simple materia medica of our aborigines, as one of their most common resources in disease. The process they employ is rude it is true, and consists in little else than exposing the body in a pit, to the steam, produced by throwing heated stones into water, containing certain vegetable substances; the principle is, however, the same, and the apparatus was greatly improved upon by the more civilized South Americans.

We are informed that the Mexicans used, and still use, a vapour bath, formed of raw bricks like an oven, with an opening at the top, the floor somewhat convex, and lower than the surface of the earth, the greatest diameter of which, according to the Abbé Cavigero, was about eight feet, height six feet, the entrance just large enough to allow a person to creep into it, and the furnace supplying the heat situated on the outside. "The bather with his attendant, enter, close the door, and while he reclines upon a mat, the attendant throws water upon a hot porous stone, placed on the stove, from which a dense vapour arises, which he directs or drives downwards, and, with a bunch of maize, or herbs made moist, gently beats the invalid, particularly on the diseased part; a copious sweat follows, which is continued for a longer or a shorter time, according to circumstances."

After this description of the more improved vapour bath of the aboriginal Americans, we shall proceed to describe from Dr. Pocock, the very celebrated *Turkish baths*, which we think will present less variation, in point of efficacy, than in regard to luxury. "One of the greatest refreshments among the Turks," says Dr. Pocock, "is in going to their bagnio's; in the first large room, generally covered with a

cupola, they undress, and putting on their wooden pattens, which they use also in their houses, they go into the hot-room, where they are washed and rubbed with brushes and hair-cloths; they rub the feet with a sort of grater, made of earthenware, something resembling the body of a bird; they make all the joints snap, even the very neck, and all down the back, which they think makes the joints supple, after this they are shaved and go into the bath; from this place they return by a room not so hot, where they stay awhile and from thence go into the great room, repose in a bed, smoke their pipe, take their coffee, and dress." This with little variation, is the plan pursued by the Persians, who, however, have two observances, which strikingly denotes their respect for the forms of their religion, and their intolerance towards strangers; we allude to their practice of performing their devotions on entering their bagnio's, and their refusal to permit foreigners to go into them, which, after their admission would be deemed polluted.

To enumerate all the interesting particulars, mentioned by our author in the first chapters of his work, would perhaps carry us beyond our just limits. Suffice it therefore, to say that he has described the remote use of the vapour bath, among the Spaniards, and Irish: the sudatories from the natural fountains of Albano, Baia, Tritoli, and St. Germano in Italy, and of Carlsbad in Bohemia, all of which, with the preceding account, goes to show the strong agency exerted by a combination of heated air, and water, both as a remedial resource in various conditions of disease and as a luxurious prophylactic.

The only claim which can therefore, be urged in favour of modern invention, relates to the mode of administering the vapour bath, by enclosing or incasing the body in a suitable apparatus, instead of the original method of exposure in a heated apartment. From the language of Lanchez, a celebrated Portuguese physician, who wrote about fifty years since, this appears to have been so great a desideratum, that we are not a little surprised at the tardiness with which human ingenuity has accomplished it. "Si l'on croit qu'il existe un reméde commode et si efficace qui puisse guerir tons les maux dont les hommes sont sonvent attaqués, ce n'est que dans les bains de vapeurs qu'il faut le chercher." And the celebrated Glauber, who perhaps studied the subject with less enthusiasm, but not less reason, long since proposed the application of the gas of sulphur to the surface of the body as a remedial resource, and has left a

description of the necessary apparatus. To fix upon the individual who made the first experiment of enclosing the body, and applying to it either a gas or vapour, would certainly be no easy task, as every one has heard of, and seen some application of the principle upon a small scale. In the city of Philadelphia, for instance, an apparatus for applying heated vapour to the body, was many years since, constructed by the ingenious Mr. Peale, and there may still be found in the Pennsylvania Hospital, a contrivance long since used for enveloping the body in mercurial fumes.

The attention of the public appears to have been more particularly drawn to the subject of gaseous agents, by the Memoir upon Sulphurous Fumigation, of M. Galés, of Paris. M. Galés began his experiments in 1812, and, after having availed himself of the extensive advantages afforded by his connexion with the Hotel Dieu, published, in 1816, the results of his experience. He professes to have been first led to the employment of the sulphurous acid gas, for the cure of psora, upon the supposition that it would have a direct tendency to cure that disease by destroying the *acarus scabiei*, or animalculi which occasion it. Nor was he disappointed in his calculations, so far, at least, as regards the cure. As to his pathological deductions, they are rendered somewhat doubtful by the existing controversy, among the French medical savans, relative to the existence or non-existence of the acarus scabiei. Whilst intent alone upon curing the itch, M. Galés perceived that various other complaints, with which his patients were affected, also yielded to the new process. A great variety of cutaneous diseases of the most obstinate species, together with obstinate rheumatic, arthritic, and the chronic affections, were among the cases most benefited. The sulphurous fumigations soon came into high repute and extensive use on the continent and in England. Dr. De Carro, of Vienna, who was among its most early, zealous, and successful advocates, published an interesting book upon the subject. In England, Sir Arthur Clark and Dr. Dick were among the first to avail themselves of its advantages, whilst, in the United States, it has been introduced into the principal cities from New-Orleans to Boston. M. Rapou, a distinguished physician of Lyons, who, for many years past, has almost exclusively devoted himself to the application and study of medicated vapours, has lately published a work, in two octavo volumes, entitled, " Traité de la Méthode Fumigatoire," &c. in which he details the results of his experience. The ardour and interest which he has ma-

nifested upon the subject, may be partially judged of, from the circumstance of his having concentrated nearly all his attention, and expended a considerable portion of his fortune in an establishment for the administration of all kinds of vapour baths, upon an extensive and magnificent scale. His work seems to embrace all the general and particular information which could be collected upon the subject, from the observation of himself and others. Indeed we have felt no little surprise to find a work so extensive, upon a subject comparatively unknown among American physicians, in which there appeared so little superfluous matter.

Our readers will, perhaps, excuse us for leaving Dr. Gibney a little longer, for the purpose of introducing a paragraph or two from M. Rapou, which, we promise them, will convey a great deal of practical instruction in a small compass. "Our general vapour baths have been designated by the names of *Oriental* or of *Russian* baths, although they have nothing in common with those of the eastern and northern people, except the name. The bathing chamber destined for their administration, answers likewise for that of the *douche*.* It should have sufficient height, be well ventilated, and seven or eight feet in diameter, which dimensions are sufficient for a public establishment, as, according to modest usage and the existing state of our social habits, we meet with few persons who wish to enter them together. In large hospitals, they may be administered to an extent proportioned to the number of patients which it is necessary should receive it. The pipe which conveys to them the vapour of a boiler, situated at a greater or less distance, should open itself into a receptacle where the substances, of which the bath is to be composed, are to be placed, the opening of which, covered with another moveable tube, is to be raised to about the height of an ordinary chair, for the purpose of rendering its administration more convenient, and situated in the middle of the closet or chamber in such a manner as to spread the vapour easily and quickly in every direction. An opening at the top, furnished with a valve or damper, should communicate with a flue or chimney by which the vapours may escape. The pipes should be furnished with cocks for the purpose of increasing or diminishing the cur-

* *Douches de vapeurs*, are made by directing a column of vapour, by means of a suitable pipe, or tube, from which it is projected with considerable rapidity and a kind of percussion, upon any particular part of the body. This column is measured by the size of the spout which is fixed upon the end of the tube, in place of which the head of a watering-pot may be substituted.

rent of vapour, and the chamber ought to contain every thing which may be wanted by the patient, that the servant may not be obliged to go out often, and thus expose him to a current of air." "To administer the *Russian* bath, according to my process, the receptacle is covered with a sort of cupola, or large head of a watering-pot, the object of which is to disperse the vapour equally which issues from the holes with which it is perforated. The patient is more or less elevated upon steps conveniently arranged for that purpose, accordingly, as it is desirable to subject him to a greater or less temperature. When he has remained a sufficient length of time in the bathing chamber, he is to be removed, the proper precautions being observed. In these baths, which are generally terminated by frictions upon the surface of the body made with the hands, a brush, or woollen gloves, the persons respire the vapour; on this account, only the simple vapours can be thus administered, that is to say, such as are composed of substances which do not irritate the lungs." The substances enumerated by Rapou, as suited to this purpose, are so numerous that we shall not attempt to enumerate them here. Suffice it to say that the list embraces a very numerous portion of nearly all the classes of the materia medica and botany; every vegetable substance, in fact, which disengages odoriferous particles or medicinal properties when exposed to caloric. The best part of eight octavo pages is dedicated to their enumeration.

Returning once more to Dr. Gibney's treatise, we shall proceed to notice other interesting matter with which it abounds. His fourth chapter commences with a philosophical dissertation upon the nature and properties of air and steam, in which Mr. Leslie's ideas are adhered to and freely quoted; we shall, therefore, refer our readers to that author's writings, for information upon those subjects, and proceed to matters more directly practical. "With respect," says our author, "to the primary effect of vapour upon the human body, it may be here necessary to observe, that the temperature of the latter being some degrees lower than that of the former, causes a rapid and considerable deposition of watery fluid over the surface, which trickles down profusely. This, at first view, is often mistaken for perspiration, but is, for the most part, vapour deprived of a portion of its heat, by coming in contact with a body of lower temperature; and from it for some moments the sensation is rather unpleasant, until the pores are sufficiently open, and the perspiration

flows with freedom, when the feelings become soothed, and the vital actions light and renovated."

With regard to the condensation of vapour upon the hair, Dr. Gibney relates, that it is very inconsiderable, and indeed so little observable, that the head appears almost dry, a circumstance, which must appear rather singular to such as do not refer it to the proper explanation. It is, however, very satisfactorily accounted for, by a reference to the well known conducting power of steam, which parts with its caloric rapidly to the surface of the body, which the power of resisting the accumulation of heat preserves below 212°, whereas the hair not possessing this power to the same degree, soon acquires the temperature of the steam, which is not, therefore, condensed and deposited upon it. In a physiological view which Dr. Gibney takes of the surface of the body, he adverts to the microscopic observations of Lewenhoek, who concluded that in one of the scales of the scarf skin, there may be about five hundred excretory ducts, and that one grain of sand will cover two hundred and fifty scales, or twenty-five thousand orifices. In designating the quantities of sensible and insensible perspiration thrown off through these orifices, the authorities of Keill and Sanctorius are quoted, both of which nearly agree, in making the insensible perspiration amount to about one half the assumpta. The sensible perspiration being varied by several circumstances, such as exercise, the state of the weather, and other causes, the insensible would seem to be much the most important discharge from the system.

Dr. Gibney, adduces many proofs to show, that the quantity of perspiration is not altogether supplied from the solid and liquid food consumed, but that a great portion is gained by *cutaneous inhalation or absorption from without.* Some of the facts brought forward to support this position, are interesting.—"A lad at Newmarket, having been almost starved, in order that he might be reduced to a proper weight for riding a match, was weighed at nine o'clock in the morning, and again at ten o'clock, and he was found to have gained near thirty ounces in the course of an hour, though he had only drank half a glass of wine in the interval."*—"A gentleman in the city, was lately weighed before dinner, and was highly offended to find, from his weight, not long after dinner, that he must have eaten, unless some deceit was played upon him, above two pounds of beef-stakes, so much had he

* Dr. Watson's Chemical Lectures.

increased in weight." A topic so interesting, might well lead us into a long disquisition, were there not others which more immediately demand our attention.

Dr. Gibney has adopted the general division of vapour baths into *dry* and *humid*, meaning by the former the gaseous products of certain substances chiefly mineral, such as sulphur, cinnabar, &c., which have no admixture of watery particles, but are disengaged or set afloat by heat, whilst by the *humid*, he designates the various products of heated water, whether in the form of simple steam, or vapour holding in solution various odoriferous, volatile, and medicinal properties.

Under the head of dry vapour bath he speaks of the sulphureous fumigations, as administered by Dr. Gales of Paris, Dr. Dick of London, and himself at Brighton. The practice, he says, "has proved of considerable utility in many cutaneous diseases found to have resisted the most active usual means, and from its effects numerous well authenticated cases are on record, showing its applicability and superiority in inveterate instances of this class of diseases, which occur much more frequently than is generally supposed, as, under one form or another, few individuals pass through life totally exempt from some disease of the skin. Under the varied changes that occur in gout, rheumatism, paralysis, and scrofula, the application of sulphur vapour acts as a most powerful agent, conjoined with the aid of suitable medicines, which in these obstinate complaints require a cautious and judicious administration." The well known medicinal powers of sulphur will not permit us to doubt for a moment the efficacy of its subtle fumes, which consist not only of an active acid gas, but of the substance itself in a state of minute division by sublimation, which must render its agency still more efficient. The invariable effect which the acid gas shows in removing the epidermis, even the thick and dense coverings of the palms of the hands and soles of the feet, evinces a degree of activity in the agent, which must render it highly useful in various diseased conditions of the cutaneous surface, and even in many deep seated affections.

It has been long known to us, that mercurial fumigation affords the most speedy means of bringing the system under the use of this mineral. Our author recommends their cautious exhibition; much experience, circumspection, and reference to constitutional peculiarities being necessary for their administration. He seems, however, from the following sentence to be better acquainted with the local than with the gene-

ral application of mercurial vapour. "The practice of exposing ulcerated parts to the local influence of mercurial vapour, by volatizing red sulphurated mercury, or the submuriate of mercury, has often been successfully exercised, and from this we may judge of its great utility upon more general application."

The practical matter of the treatise under consideration, being to us much the most interesting part of it, we shall proceed to make very free quotations.

"Under the appellation of Balnea Laconica, as used by the Greeks and Romans, the vapour was impregnated with particular medicinal plants; and such are our general sensations, as influenced by different odours, that the practice often proved sucessful where the effect from the heat and steam of simple or sea-water was found inefficient; hence, in oriental countries, various vapours, from aromatic woods and balsams, from plants, whose leaves, and flowers, and essential oils, diffuse grateful and refreshing odour, are used medicinally and advantageously, as remedies in disease, or as sources of luxury and voluptuousness; this practice has the sanction of antiquity. Hippocrates used vapour, (particularly in female complaints) charged with medicinal substances of different kinds, and modern experience every day gives further proof of its great utility."

"In the military hospital at Naples, under the active and persevering hand of Assalini, between six and seven hundred patients have been cured by the application of vapour, medicated with a variety of substances; and, from the experience of Dr. De Carro, of Vienna, in cases of gout and rheumatism, the successful compared with the unsuccessful cases, by this means of cure, are seven to one."

"Mercury, sulphur, camphor, opium, the vegetable, animal, and volatile alkalies, essential oils, and aromatics, have each and all their respective advantages. Some of these substances are rendered vaporific in a dry form; others require a previous solution, in watery or other fluids, before this can be effected. Amongst these, that most commonly in use is sea-water, which conveys in its vapour a sufficiency of sea-salt to render this bath of more general utility than vapour from heated water, although the latter, in some pulmonic diseases (such as incipient phthisis and asthma,) may be found most suitable, as from experiment it is proved to contain less decomposable oxygen gas."

"Modern experience has shown, that the stimulus of carbonic acid gas combined with warm water, and exhibited under the form of a warm bath, is applicable to the circumstances

of disease, from its action on the surface being of a particularly grateful character. At Aix-la-Chapelle, this form of bath is now in use, and is articially prepared at the institution formed for the production of mineral waters at Brighton.

Such is the degree of perfection to which the imitation of natural waters is carried at this establishment, that our author assures us it is impossible to distinguish the factitious waters of Carlsbad, Ems, Marienbad, Eger, Pyrmont, and Spa, either by flavour or medicinal effects, from those taken from the natural fountains.

Dr. Gibney states, that fumigation from the vapour of tar, has in some stages of pulmonic affections, been highly recommended; he, however, thinks little good is to be expected from its use, and, that it will probably be found worse than useless, in cases of confirmed or incipient phthisis.

Of the use of *chlorine* as practised by Mr. Wallis of Dublin, who has published a book upon the subject, our author says little, viewing the agent as one but imperfectly known at present, the utility of which, must be more fully demonstrated by further time and experience.

The *nitrous vapour*, procured from the decomposition of nitre or common salt, by the addition of sulphuric acid, he says will prove salutary and useful, as a general or topical application to fœtid and ill conditioned ulcers.

Dr. Gibney, notices the *electrico-ætherial* baths in such a manner, as to excite our curiosity without allaying it. These he states were formerly used by Mr. Lawnds, and now upon an improved and very efficacious plan, by Mr. Adams, of London. He thinks them deserving particular attention, as the powers of the electrical apparatus are such, as to command the full influence of the electrical fluid, under all its forms and modifications, without the usual difficulty, and labour in its production. "By this ingenious and judicious contrivance," he says, "there is no effect to be derived from electricity, that is not under command, and rendered applicable to every medical purpose that may be required, with the greatest facility."

Having thus treated of the different vapour and gaseous baths, Dr. Gibney proceeds next to describe his mode of applying aqueous vapour, his apparatus being intended for only one person at a time. "Without," he proceeds, "adverting to the grand and magnificent scale on which establishments of this nature have been formed, almost every intention may be fulfilled by the simple contrivance now in

general use, which is found practically suitable to most medical purposes; and it may be observed, with great truth, that as we improve in every science or art, the means become more simple; and with respect to the use and application of the vapour bath, this is constantly verified."

"In an under apartment, a boiler having a safety valve, contains a sufficiency of water for the necessary supply; and from the centre of its semispherical cover, a tube issues to the apartment above, and opens into a hollow space eighteen inches above the floor, which is either square or circular, the surface being covered with wicker-work sufficiently strong to sustain the weight of the patient and the seat; four slight posts support a cupola, and over all is a covering of thick white wollen cloth, which is impervious to steam, and through which there are openings for the convenience of the patient and those in attendance; through one of these, at one side, the head is easily freed from the vapour, should it prove too powerful; it is also lessened in its intensity by a valve at the top, and by a stop-cock at bottom, its further admission is regulated with facility.

When all is prepared, the vapour issues instantly into the hollow space, and gradually ascends, diffusing a general warmth, which is increased or diminished according to circumstances, and thus applied for a longer or shorter time, as may be deemed necessary." This description though it applies alone to the administration of simple vapour, needs little variation to adapt it to the application of the properties of sea-water, or medicated substances in general.

We cannot avoid expressing our pleasure at the author's recommendation of heated vapour, applied by means of a spirit lamp, conveyed through a suitable tube, in cases of suspended animation from drowning, or other emergencies where the prompt application of heat is required, a plan which has been adopted by the Humane Societies of England, and which we think highly deserving the attention of similar associations in our own country.

Dr. Gibney describes the spirit lamp vapour bath of Dr. Charles Gower, of London, in which we recognize an old invention, claimed somewhat unjustly in this country some eight or ten years since, by Dr. Jennings. Of Dr. Gower's "Domestic Sudatorium," an engraving is given which differs little in appearance and nothing in principle from that of Dr. Jennings.

In speaking of bathing establishments upon an extensive scale, Dr. Gibney ascribes a vast deal of praise, as due from

the public, to the Honourable Basil Cochran, who, at a great expense, has erected one upon a grand scale at his residence, Portman-square, London; and who, he says, "from the advantage he experienced in his own person from the use of the vapour bath, has been at very great pains and expense to render this means of relief as general as possible, and through whose meritorious efforts many have derived most signal advantage." He further observes, that "baths on an extensive scale, where a limited number of persons may be exposed to vapour at the same time, in apartments formed for that purpose, are more luxurious and agreeable, as the space admits of a free and more unconfined respiration."

Having now completed our examination and analysis as far as regards vapour baths and their various modes of administration, we shall devote a little space to certain adjuvants, the use of which is in some countries inseparably associated with them, and under certain circumstances may be found beneficial in all. We refer to the processes of shampooing, friction, percussion, pulsation, and compression.

Shampooing is universally practised by the Chinese, Japanese, and in fact, throughout all Asia, and perhaps the greater part of Africa. In Egypt it is called *massing*. It is generally performed by persons regularly instructed in the art, who are prized in proportion to the skill and dexterity with which they perform it. The great object proposed, is, to render the muscles elastic and the joints supple, and with these views it is practised upon persons of all ages, even upon children.

"After exposure to the bath, while the body is yet warm from the effects of the vapour, the shampooman proceeds, according to the circumstances of the case, from gentle friction, gradually increased to pressure, along the fleshy and tendinous parts of the limb; he kneads and grasps the muscle repeatedly, presses with the points of his fingers along its course, and then follows friction in a greater or less degree, alternating one with the other, while the hand is smeared with a medicated oil, in the specific influence of which the operator has considerable confidence. This process is continued for a shorter or a longer space of time, and, according to circumstances, is either succeeded or preceded by an extension of the capsular ligament of each joint, from the larger to the smaller, causing each to crack, so as to be distinctly heard, which also succeeds from the process being extended to each connecting ligament of the vertebra of the back and loins. The sensation at the moment is far from agreeable,

but is succeeded by effects not dissimilar to what arises from brisk electrical sparks taken from the joints in quick succession."

The importance of friction is well illustrated in a trite saying attributed to Sir William Temple, "that no one need have the gout who was able to keep a slave to rub him." The inhabitants of the east hold it likewise in high estimation, particularly, we are told, as a means of relief from the effects of excessive bodily fatigue or exertion. In the second book of Celsus, a whole chapter is devoted to its use in certain diseases. He recommends that it should be made by the hand; and that inveterate pains in the head are relieved, and paralytic limbs strengthened by it. But for further information relative to its ancient use, we refer our readers to the original classic fountain.

"Some years since," says Mr. Gibney, "a Mr. Pugh, a surgeon in London, practised the art of friction on diseased limbs, with considerable success. Being a good anatomist, and particularly well informed as to the origin and insertion of muscles, his mode of friction was conducted accordingly, and much advantage followed from his practice; since his time, Mr. Grosvenor's plan as exercised under his immediate direction, and pretty generally by others agreeably to his mode, bas been found of the greatest utility, where other means failed, or proved only partially useful."

Medical *percussion* and *compression* was many years since brought into notice by Admiral Henry, for the cure of gouty and rheumatic affections, and has since had several zealous advocates.

Pulsation or *percussion* is performed by means of an instrument, which may be denominated a cork mallet, well secured upon an ivory handle. With this the patient can be his own operator, adjust the precise force which he is enabled to bear, and regulate the rapidity of the process according to the heat and the activity of the local circulation.

Following the author's arrangement, we come now to the consideration of vapours and gases as applied to the treatment of particular diseases. The best time, in general, to take the bath is sometime before dinner, and the mean time for remaining in it may be cited at from a quarter to half an hour. Various circumstances connected with the nature of the patient's constitution, disease, &c. must regulate the proper administration. In hypochondriasis, epilepsy, tetanus, nephritic, and other diseased conditions of the bladder in hysterical affections, and those dependent upon what is term-

ed nervous debility, attended with continued or periodical head-ache, this simple process, he thinks, proves useful by exciting the superficial blood-vessels, and promoting excretion and secretion, which are so essential to animal existence. "When obstructions of the principal viscera exist," he continues, "from which other serous diseases, such, for example, as dropsy, indigestion, obstinate constipation, irregularity in those functions appertaining to females, jaundice, chronic affections of the head and chest, and many anomalous complaints which are difficult to classify, great care should be taken to ascertain whether local or general bleeding, together with purgatives and deobstruents, should not precede the active use of the vapour bath; for, on this subject, experience has, in many instances, instructed us, that much mischief and considerable danger has arisen from a want of the necessary precaution; and a remedy, in itself of very great value and importance, has but too often suffered in its character, by invalids entering upon its use without due consideration and circumspection; this observation, in a general sense, should be understood with reference to almost every case submitted to its influence; holding in view, that, as it is a powerful means of relief, the discretion necessary to its administration should be considerable."

To specify all the morbid and irregular conditions of the system, in which the simple or medicated vapour-bath may be advantageously resorted to, either as a principal remedy or valuable adjuvant, could not be expected from our author, neither can it be looked for from us. The properties of the agent, when properly understood, must lead to its just application, upon the same principles which govern the administration of other means. The good sense and discrimination of a physician will always be requisite to give the vapour-bath its due effect, and he will find his own judgment of more advantage, as a guide, than a prolix detail of nice directions.

REVIEWS

OF

AMERICAN MEDICAL JOURNALS.

ART. XII. *The Carolina Journal of Medicine, Science, and Agriculture.*—Conducted by THOMAS Y. SIMONS, M. D. and WILLIAM MICHEL, M. D. Vol. I. No. 1. January, 1825. Charleston, (S. C.)

THE articles of this Journal which are practical are only noticed. A number of interesting cases of necrosis of the tibia, humerus, ulna, &c., in which the bone was laid bare, and the sequestrum extracted, by free openings by Hay's saw and the trephine, and the limbs saved, are detailed by the editors, from the practice of Benjamin B. Simons, one of the most celebrated surgeons of South Carolina. They amount to six, and were all successful. A sequestrum of four inches and a half was removed from the tibia; the wound was dressed with lint, and soon healed.

A case of medullary abscess, which appeared in an ulcer on the tibia, occasionally breaking out and healing to a certain point and breaking out again, was also treated successfully. The bone, on examination, was considerably enlarged and tumefied; a probe was passed into the cylinder, which determined the propriety of the operation. A piece of bone was then removed with the trephine, after dissecting back the integuments: the diseased and cancellated structure of the bone was next removed by the chisel, the wound was dressed with dry lint, and healed in a few months. Seven cases of the same kind are related, in which the same operation was successful.

A negro man received a violent blow upon the skull, fell senseless, and lay in a comatose state for six months: a considerable swelling was observed on the side of his head at the end of that time, which was opened, and discharged a considerable quantity of pus: he awoke, and his senses continued perfect. In six months more, as the wound would heal up (presenting a fungous appearance about the size of a pea) and break out again, it was examined by Mr. B. Simons, and a probe was passed through an orifice in the integuments, near the posterior inferior angle of the left parietal bone, descending about three inches into the cavity of the skull; on withdrawing it, matter rushed out, proving that there was an abscess of the brain, which discharged through the fistulous openings in the tables of the bone. A circle of bone was removed by the trephine, and a large quantity of matter escaped. Mr. Simons introduced his finger into the orifice, and found a considerable cavity; and extending his finger about two inches, he felt the surface of the brain: pressure was made upon it, and the patient became comatose. After several months the wound healed perfectly, and the man was restored.

A case of disease of the antrum highmorianum, in a young woman about twenty-six years of age, is given, which at first commenced with a swelling of the cheek, and a painful state of the jaw. Several years before, a tooth was extracted, and a tumour grew from the place, which had its origin from the antrum.

"The alveolar processes immediately connected, and in the vicinity of the cavity, were carious, and in the incipient state of exfoliation. The tumour was so large as to fill the cavity of the cheek on the same side, extending over the tongue, and out of the mouth, so as to exhibit a very un-

sightly appearance when exposed. She kept it concealed with a handkerchief; a constant salivation was attendant, like in a fracture of the inferior jaw bone. The food, gruel or thin soup, was sucked in at the right angle of the mouth. She readily consented to the operation.

"When in Europe, I had seen the diseased antrum treated by extracting the two teeth under it, then a perforation made by the antrum trephine, for the discharge of the matter, then a small poker heated to a red heat, a canula next applied to the perforation, to defend from the heated poker, which was inserted through the canula into the antrum; likewise the external operation, where an incision is made on the face, and the perforation made under the malar process; this latter practice did not succeed.

"In this case, I thought it more surgical to cut away as much of the jaw as to freely expose the cavity of the antrum, that no matter could be confined, and the lunar or vegetable caustic could be well applied.

"In performing the operation, in the first place the tumour was removed from the jaw; then an incision was made through the integuments in the mouth, from the second incisores along the palatine process, as high as the knife could be applied to the palate bone. Next externally the integuments were dissected from the second incisores, along the ala of the nose, round and under the infra orbitar foramen, and under the malar process to the pterygoid process of the os palati. A flexible saw, like the mainspring of a watch, applied, and the whole of the left side of the jaw was removed, completely exposing the antrum. By introducing the finger, the orbitar process of this bone could be easily felt. During the operation, the jarring (occasioned by the sawing) gave great pain, and there was considerable hæmorrhage, not arising from any distinct arteries, but from the general surface. The surface was dressed with lint, and every third day the lunar or vegetable caustic was applied. No fungus appeared, and the wound healed in six months. She is now perfectly recovered."

Trismus Nascentium. By Charles W. Capers, M. D.—"This disease is so well known, that it requires no particular description in order to distinguish it from any other to which children are liable. It is, however, necessary to state, that it is attended with spasm, a contraction of the jaw, an ulceration of the umbilicus, and always occurs before the ninth day, and seldom before the fourth or fifth. Its cause has been ascribed—

"1st. To cold.
"2d. To smoke.
"3d. To retention of the meconium.
"4th. To confined air.
"5th. To dividing the funis umbilicalis in an improper manner: and
"6th. To the ulceration which succeeds the falling of the funis.

"It cannot be owing to cold, because this agent would have equal effect upon the tenth day, as upon the eighth or ninth. The same objections would occur with regard to smoke. Were it owing to a retention of the meconium, it would probably make its appearance sooner. Upon the subject of confined air, I shall beg leave to copy a few lines from a recent English publication called the Lancet."

In a Dublin hospital, many deaths occurred from this cause—not quite one-third of the whole number of patients; but, after the rooms were kept thoroughly ventilated, about one-twenty-fifth. In Carolina, however, Dr. Capers states that it cannot proceed from this cause, because there the ventilation is perfectly free in the houses of the negroes. He ascribes it, with Dr. Thomas, to an ulceration of the navel, succeeding the falling off of the umbilical cord. Frequent washing the child, careful dressing the wound with cerate, and upon the fourth or fifth day the addition of a little spirits of turpentine, applied to the separating part three or four times during the twenty-four hours, carefully washing with Castile soap and warm water, he recommends as a preventive.

A Case of the use of Pyroligneous Acid in Sphacelus. By T. Y. Simons, M. D. —It was applied, in the proportion of one part of the acid to six parts of water, to the sloughing surface of a gangrene of the bladder, perineum, and scrotum, produced by incontinence of urine, and with the best effect: granulations arose, and the mortified parts separated, and gradually healed. In fœtid ulcers, it corrects the discharge.

Medical School of South Carolina.—Medicine has begun to flourish in this young establishment: from forty to fifty students attended the lectures last year. Their Journal augurs favourably of their industry.

Dr. Logan, of Charleston, has published a book on the Diseases of Children, which, from his being for many years the physician of a hospital where there are generally one hundred and eighty children, is said to be valuable. As our summer diseases are dangerous to this class of patients, his experience will, no doubt, furnish something valuable on this subject.

Art. XIII. *The Carolina Journal of Medicine, Science, and Agriculture, No. 2, for April,* 1825.

A Case of Abscess of the Antrum Maxillare, attended with extensive caries of bone. By J. De La Motta, M. D.—An abscess in the antrum maxillare burst in the mouth, "over the palatine bones," and the face, particularly under the eye, considerably swelled; and a poultice was applied to it; stupor and vertigo came on; an opening was made in the mouth, which gave vent to about an ounce of matter. Some days after, matter pointed below the external angle of the eye; the os malæ was diseased; an orifice was made, enlarged, and the malar bone exfoliated, and continued to do for a long time; the palatine plates, on the left side, exfoliated; two teeth were extracted, and matter passed their sockets.

"A probe, introduced through the orifice, made at the external angle of the orbit, could be passed into the mouth, and readily through the opening, made by the removal of the teeth. A seton was inserted, following the tract above described; and although this plan of treatment has been reprobated, and its utility impeached, still in this instance it evidently aided in the speedy removal of the carious portions of bone; after it was withdrawn, the discharge continued, attenuated, a strong injection of sulphate of zinc was used, which, being steadily pursued, produced a healthy change. The external and internal orifices soon closed, and, with the exception of a very inconsiderable discharge from the nostril of the affected side, the patient is well, having a depression about the lower lid, which separates that from the upper, much more considerable than is observed on the opposite side."

Dr. Lorinan relates a case of abscess, which formed in consequence of peritoneal inflammation. The matter, five pints, was discharged through the umbilicus by a puncture, and the patient recovered in two months and a half.

Art. XIV. *The Carolina Journal of Medicine, Science, and Agriculture, No. 3, for July,* 1825.

This Journal contains a case of extirpation of the jaw, by B. Simons, of Charleston. It was taken out from the first bicuspis on one side, to the coronoid process on the opposite. The woman got well in a short time.

There is in this number a sensible and judicious paper on the circumstances which require the Cæsarean operation, as also the history of an epidemic catarrh, the most interesting articles in this number. Though written in an enlightened spirit, they contain nothing absolutely new in practice.

We observe the aristolochia sipho is used in the catarrh as a diluent and sudorific. It has long since been recommended, and should be more generally used.

ART. XV. *The Philadelphia Journal of the Medical and Physical Sciences, No.* 19.

THE practical papers only are reviewed in this number.

Condie on Cholera Infantum.—This essay presents a well digested view of the prevailing opinions upon this interesting subject, and is highly creditable to Dr. Condie. He considers it as a variety of the bilious fever, occurring in young subjects; an opinion which has prevailed since the time of Cleghorn. Adopting the view of Johnson, that it proceeds from the determination of the blood from the surface to the interior of the system, he states, that in some cases, he has seen inflammation and ulceration upon the surface of the intestines. With regard to the remedies, Dr. Condie advises those generally used. Emetics he believes hurtful, which is contrary to our best experience. In the first stage they are certainly advantageous, and mainly to be relied upon. Dr. Kuhn, a celebrated and most judicious practitioner of this city, united small doses of pure ammonia to calcined magnesia, in a mixture with gum arab. sugar and water. It is now used in this city, with success, by some of our most respectable physicians. Dr. Condie reprobates the use of the cold bath in this disease. As a preventive, however, the frequent immersion of the body in cold water during the hot weather, four or five times a day, is completely successful. Of this Dr. Condie makes no mention: and when the temperature of the body is above 98°, in the course of the disease, it may be used with success. Charcoal is mentioned as having been tried by Dr. Jackson, and by the author of the essay, with good effect; and it is accordingly recommended by the latter, in the dose of from five to ten grains, every three hours. The editor has known of a case of diarrhœa, in which it was tried: it produced constipation to an alarming degree, and it was only by the use of the most active cathartics that the patient's life was saved. Dr. Daniel, of South Carolina, has mentioned, in a paper on the subject in the Philadelphia Journal, that charcoal, when taken internally, produces concretions from the size of a hazlenut to that of an egg, showing its danger. This fact is sufficient entirely to banish charcoal, when prescribed alone, from the materia medica. On this point, therefore, we cannot agree with the author. With other purgatives, as rhubarb, it may answer very well.

Dennie on Bronchocele.—The late investigation on goitre appears to have added little upon the treatment of this disease. The iodine is the burnt sponge in a more simple form; and it is probable that the use of salt, recommended lately by the late President of the New-York State Medical Society, owes its virtue to the elements of the same substance. Dr. Dennie confirms the external application of a solution of rock salt to the tumour; it had the effect of quickly reducing its size, but with the dangerous and immediate consequence of pulmonic irritation. Salivation was mortal. Smoking tobacco appeared to cure in one instance. We should suppose, from the

success of cicuta, that any of the narcotics would probably be serviceable. He confirms the use of the seton, introduced through the tumour, as introduced by Professor Quadri, of Naples, though the experiment was only tried upon dogs; and supposes that some peculiar exhalation, arising from the coal which abounds in that country, may produce the disease. This suggestion we are happy to say, from the extent of this mineral in Pennsylvania, is not confirmed by a more deliberate view of the subject. The paper goes on to state some facts, taken from Richardson's Journal to the Polar Sea, to prove that those who drink the water of the Saskatchawan at Edmonton, near the Rocky Mountains, take the goitre, for which we refer to the paper itself.

Dewees on the late Epidemic Catarrh.—This paper consists of a description of the epidemic influenza which prevailed in the spring of this year. The description is minute, and highly creditable to Dr. Dewees, though we do not discover any thing new in the treatment. The following opinion on the subject of epidemics is singular, and no doubt escaped Dr. Dewees in the haste of composition, amidst his numerous occupations. It expresses certainly the prevailing opinion on the influenza in this country.

"It would seem that the progress of epidemics is by a regular march from some one point; and their advance can be distinctly marked by the general similarity of their characters, and prevalence of winds from the originating point."

As at present, however, there exists great discussion on the subject of quarantine, this general reference of the source of epidemics to one point, appears too exclusive. The remittent bilious, plague, yellow fever, are now generally believed, and with good reason, even in the cities where they appear to rise up irregularly in detached spots, from putrefactive sources, evincing their origin from a cause which gradually diffuses itself through the air, acting generally throughout the district.

Dr. Dewees, though his expression is a general one, does not, we suppose, mean to extend it to epidemics of every description. The epidemic catarrh, or influenza, the subject of the paper, does not appear to originate from a particular point. Its cause pervades the whole atmosphere. Ships at sea are taken at the same time that people in the same latitude on land are affected. On this subject the records of medicine furnish accurate observations. While the Atlas East-Indiamen, in September, 1780, was sailing from Malacca to Canton, the influenza broke out among the crew. At Malacca, when the ship left that place, there was no epidemic of any kind; of course the crew must have received it through the air. And at the same time time that the Atlas had the disease in the Chinese Seas, it raged with violence at Canton. It also prevailed on the coast of Coromandel and in Bengal at the same time. This same epidemic in England, from the evidence of an extensive correspondence, observed no regular progression from one point of the compass to another.* The general spread of epidemics from one point does not therefore always take place.

Dr. Dewees recommends the plan followed in chronic coughs and consumptions, of confinement to the room.

Thomson on the Epidemic Fevers of Virginia.—This paper is the thesis of Dr. Thomson, from Virginia, who has just graduated. After giving some account of the topography of the district in which these fevers prevailed, he panegyrizes the waters of the Shannondale Spring, situated in Jefferson county, near Charleston. They are used in debility after bilious fevers, the last stage of dysentery, in dropsy, and as a diuretic in calculous affections; also, in dyspepsia, amenorrhœa, chronic rheumatism, and tinea capitis.

* Lond. Med. Trans. Vol. III. 1785.

"The analysis of Dr. De Butts is as follows:

Sulphate of lime - - -	·63.
Carbonate of lime - - -	10.5
Sulphate of magnesia - -	23.5
Muriage of magnesia - -	1.
Muriate of soda - - -	1.
Sulphate of iron - - -	0.3
Carbonate of iron - - -	0.7*

"The temperature of the water is fifty-five degrees of Fahrenheit, and eleven of Reaumur. About thirty grains of solid contents are deposited by evaporating a pint of the water."

The remainder of the paper contains the history of the epidemic, which has been described by Dr Cooke in the Recorder, No. 27. Dr. Thomson, deserves great praise for this his first attempt; his style is good. He differs from Dr. Cooke in the use of purgatives as an exclusive remedy in this disease; the bark also was given, with effect: calomel, so as to produce salivation, purgatives, and tonics, with occasional bleeding with the above remedies, constituted the treatment. Spirits of turpentine, administered before the chill, prevented it.

A case by Dr. S. Jackson, shows the accuracy of the stethoscope in detecting effused water in the breast. The operation for empyema was performed successfully, and relieved the patient. He died, however, some time afterwards, of chronic inflammation of the chest.

A case of aneurism of the inguinal artery, is related by Dr. J. R. Barton, which an empiric opened with a lancet, and the wound healed up, after considerable effusion of blood; the limb shrunk and mortified. On dissection, it appeared that the iliac was ossified, and the sac was found to have been filled with coagulated lymph. For farther particulars of this case, we refer to the essay itself; as well for the particulars of two cases of extra uterine conception, which follow.

ART. XVI. *The Philadelphia Journal of the Medical and Physical Sciences, No. 21. No. 3, New Series.*

DR. LAWRENCE gives an account of a black man, with ossified arteries, which produced mortification of the leg. Amputation was determined upon, but was desisted from, in consequence of the decision of two of our most celebrated men, Drs. Hartshorne and Parish, who came in during the operation, on the grounds that in consequence of the ossification of the arteries, it would be impossible by ligature to stop the hemorrhage. Dissection confirmed the truth of this suggestion: the artery, on trial, would not bear the ligature; it broke out, and would not hold. A case occurred in the Alms-house, of the same kind, in which death took place after the operation. Would it not be possible to obliterate the trunk of an artery in this condition, by plugging it up with a small piece of soft wood, which might be left in, and secured to the surrounding parts by a ligature wrapped round it and the vessel. The vessel would then be filled up by a coagulum, and be gradually absorbed and obliterated.

Scarpa, in a paper on the application of ligatures to the principal arteries, states that the union of the sides, after a ligature is applied, is effected in

* Gaseous contents, sulphureted hydrogen and carbonic acid.

the ordinary way, by inosculation of vessels, and to produce it, only moderate inflammation is expedient. He states, that the mode of tying the artery proposed by Parey, &c. is the best, which is to interpose between the ligature and the vessel a small cylinder of linen covered with cerate, and to tye it in that position, and there to let it remain for three or four days, when the adhesive process will be completed. The objection to the application of several ligatures gradually tightened is, that the speedy ulceration of the coats of the arteries is the result; and a ligature of reserve is equally dangerous, because the same accident may happen in that case. The incision, he thinks, should not be extensive, nor should the cellular membrane be separated from the coats of the artery, as it endangers ulceration. This seems reasonable; the greater the ulceration, the greater will be the inflammation and danger of destruction of the parts by it. He thinks that the use of a series of ligatures, tied tighter the further they are from the heart, and thus diminishing the calibre of the tube at the point where the obstruction is made complete; also, the method of Ætius and Celsus, of cutting the artery between the ligatures; the circular ligature made with a single thread, so as to rupture the inner coat; and the plan of compression by metallic instruments, are all to be regarded as inferior to the one above mentioned. This conclusion he supports and proves by experiment, and it appears reasonable. Waxed threads, laid parallel to each other, are drawn so close as to produce a union of the sides, by the interposition of the cylinder of linen, covered with cerate, and are so long as to pass about the one-twelfth of an inch above and below the ligatures: the ligature should be about one line in breadth for the large artery of a limb; it should not be drawn excessively tight, nor placed near the origin of a large lateral branch.

The ligature may, by this plan, be removed at the end of three or four days; it certainly facilitates the cure: if left in, it produces ulceration. In old persons, it should be suffered to remain six days, as the union does not take place in them but slowly. Cases are given by Scarpa, in which this plan has succeeded. The mode of the removal of the ligature by Scarpa, is given in a former number of this Journal, vol. vi. p. 701.

Dr. Oslere, on the ergot, refers its origin to disease in the rye, which he considers, from some experiments, to be contagious. He put a spear of the ergot on a head of rye, when in flower, and shortly afterwards it, and several others near it, became covered with that vegetable substance. It is more probable the seed of the ergot was the mode of reproduction. He states, that it only acts upon the rye when in bloom.

The ergot produces abortion in animals, as Dr. Oslere proved by experiments on a sow, a cat, and a cow; they aborted shortly after taking it, and soon recovered their appetite and ordinary strength. It has accordingly been used by our celebrated countryman Dr. James, for procuring abortion in cases of narrow pelvis. He relates cases of the success of this remedy in uterine hemorrhage.

It appears that the operation of harelip has succeeded, when applied to the division of the soft palate. When the bones of the mouth are deficient, the operation is less likely to succeed.

Some cases of hydropthalmia, occurring in the same family, are given by Dr. T. Coxe. They were incurable.

Dr. Howell relates some cases of gangrene, in which a tumour, like a small kidney, formed under the tongue, thrusting back this organ; in the course of two days the tumour became shrivelled, and looked like a dried fig; pains, with a swelling like the mamma about the gastrocnemius muscle. Mortification took place in different parts of the body, and the woman died.

For this affection, Dr. Howell used the common remedies, viz. stimulants, wine and bark, with cantharides applied externally: the latter was used in the form of decoction, in turpentine. It is often more expeditious and more easily applied. Dr. Howell thinks this disease proceeded from the use of ergot.

ART. XVII. *The Philadelphia Journal of the Medical and Physical Sciences, for February*, 1826.

DR. SHARPLESS, in a paper on prolapsus uteri, after enumerating the various irregular pains in the belly, sides, and breast, produced by this affection, discusses the question whether their intensity is in proportion to the extent of the displacement of the womb, which he decides in the negative, from the fact that the womb, in one case, protruded from the vagina, and produced inconsiderable symptoms of derangement, compared with other cases, in which there was little derangement of the uterus from its natural position. This question of the symptoms, pains in the belly and breast, has excited some attention in the journals lately. Like the protrusion of other viscera from their situation in the abdomen, it produces pains of an irregular kind, and appears to result from the stretching of the membranes, or the irritation, as some suppose, communicated to the nerves by the prolapsus of the viscus. Mr. Lawrence, in the last edition of his book on hernia, mentions several varieties of that malady, which cause general disturbance of the stomach and bowels, uneasiness and pain in the abdomen,* colic, disturbed digestion, debility, lowness of spirits, hiccough, nausea, and soreness of the epigastrium. the above rationale is therefore reasonable. In women, the prolapsus of the uterus is attended with more extensive nervous affections, with pains throughout the back, belly, breast, and pelvis.† The pessary is the remedy only to be relied on. On this subject the paper, after taking a sensible view of the subject, gives the preference to that of an oval shape, as it presses less upon the bladder and rectum.

Cases illustrating the danger of inflammation from exercise during prolapsus, are given by the author, and also of the effect of the disease in producing pectoral affections, such as cough, pain in the side, &c. The usual remedies of rest, venesection, &c. relieved the disease, and afterwards the pessary was applied with effect.

Dr. Church, of Pittsburg, in a very well written paper on the water of the Bedford Springs of Pennsylvania, states that the principal active ingredient is sulphate of magnesia, in the quantity of twenty grains to a quart. As general indications and principles must direct the use of the water, we dismiss the paper, by stating, that the reflections of Dr. Church appear to be judicious. We cannot, however, think with him that the tonic virtues of this water, which contains only about one and a quarter grain of carbonate of iron to the quart of water, can be very considerable. The invalid will probably derive as much advantage from the fine air of Bedford, and the gentle purgative effect of its water, as from any other qualities it may be supposed to possess.

* See Lawrence on Hernia, edit. 1824, pp. 511-12. 537—546.

† It was on this view, that we considered Dr. Dewees' paper on that subject as containing nothing new. The pains in the side, as the pains produced by the prolapsus, are found, and have been described, throughout every part of the cavity of the abdomen and pelvis, did not entitle him to the credit of originality, any more than pain under the sternum, scapula, sternomastoid muscle, in liver disease, would be considered as a discovery.

Dr. Holcombe, of New-Jersey, in the sinking stage of bilious fever, prescribes large doses of calomel as alteratives, and to supersede the use of tonics, opiates, and stimulants: he gives it even when diarrhœa is present, and with good effects. A large dose, he thinks, renders the stools consistent, when a smaller one produces only serous discharges; and this medicine, he thinks, is particularly useful when the tongue is dry and of a dark brown colour, or is red and glazed; when the skin is hot, dry, and rigid, attended with diarrhœa. When the tongue is moist and relaxed, it must be avoided, or administered cautiously. The use of large doses of this remedy he extends to cholera infantum, which he believes to be more effectual than the small doses of Dr. Ayre. Opiates and stimulants he rejects in the last stage of bilious fever; he supplies them by the use of calomel alone, which he considers as valuable an antidote for this disease as quinine is for intermittents. These observations add another to the important testimonies on the subject of the treatment of bilious fever. The use of calomel, in all its forms, is unquestionably invaluable: the excitement and removal of black discharges by the free use of calomel, aided by resinous cathartics, appear to be the most powerful agents in this disease. We think, however, that the rejection of all stimulants in the treatment of its last stage, with the exception of small doses of opium, as advised by Dr. H. is too unlimited.

In reviewing the paper on the practice of the hospitals of Paris, the common modes pursued in this country and England appear to prevail there, and the French, so illustrious in the career of modern improvement, are now no less active in the use of bleeding than their neighbours in England. Mercury is regarded as a specific for the venereal disease, assisted by the sarsaparilla, &c. Dropsy is treated by urea, given as a diuretic. Lerminier treats fevers by diluents, if no local determinations exist: if plethora, by general bleeding; if local irritation, by leeches to the part. The same variety of opinions and treatment on this subject, exists there as here; some pursuing more mild, others more energetic plans.

Ptisans made with vegetable decoctions, and the sulphuret of antimony, which owes its virtues to the black oxide of arsenic, almost always united with it, are particularly successful in the venereal: how far this is true, it is difficult to say. The use of these remedies appears to be an abridged result of the successive experiments made upon guiacum, sarsaparilla, &c. which, as they were once believed to be capable of curing the disease alone, are now continued as assistants to mercury, the great remedy for this disease; which, though in certain situations and climates, may be cured without it, we are pleased to observe, retains its sway upon a theatre so extended as Paris, where its dangerous qualities could not fail to be pointed out. The preparations of gold are now completely discarded.

General symptoms often follow gonorrhœa, in the opinion of Cullerier; they are treated by the same means as those of secondary syphilis. This paper contains valuable confirmations, on most of the subjects which it treats, of the practice usually adopted in this country.

The paper of Dr. Bell, denying the noxious qualities of vegetable exhalations, is entirely too chimerical, considering the vast mass of facts brought in their favour by the present state of science. We should be disposed to say of Dr. Bell, after reading this paper, as Lavater said of Priestly, when his portrait was presented to him—that he could unsettle every thing, and settle nothing.

A conspicuous member of the profession, of this city, has come to the conclusion that animal exhalations are innoxious. Dr. Bell expunges those arising from vegetables, from the catalogue of the lœdentia. We now want only a third, to prove that fever itself has no existence, to complete the paradox. Who will decide when doctors disagree?

Dr. Holcombe advocates the practice of giving small and divided doses, often repeated, instead of large doses of the ergot, which he considers as having destroyed more children than the improper use of instruments. Given in this manner, the uterus acquires so great energy, that the difficulties of first labours, and even of a contracted pelvis, may be overcome. It has appeared to prevent puerperal fever, in the practice of Dr. H. It also suppresses the lochia, without injury to the mother. When flooding after delivery is apprehended, in cases of partial prolapsus of the uterus, and of habitual bearing down, Dr. H. prescribes it also, with effect.

He also uses it to lessen the size of the child, in cases of contracted pelvis; gives medicine, and a smaller quantity of food than usual to the mother. It reduced the bulk of the child, in one instance, to five and a half pounds: the usual size of the children, by the same mother, was ten pounds. A lady who had two miscarriages, and though the child each time died about the seventh month, the labour was difficult, from the size of the fœtus. Accordingly, in a third labour, Dr. Holcombe gave pills of calomel three grains, squills two grains, and digitalis one-fourth of a grain, and repeated it thrice a day, in order to lessen the size of the child, and with effect. He thus succeeded in producing four children of a small size, which could not, without the aid of a medical regimen, have been delivered. The plan generally followed was to administer the pill thrice a day, and forty drops of laudanum twice a week, and to be bled every month. As soon as the mouth became sore the calomel was omitted, and again resumed when it got well. Where the health of the mother is delicate, or predisposed to consumption, this plan would certainly endanger her life. I have heard of a case, where this was the consequence of using a spare diet alone; the mother died of consumption, after the child was delivered. It must therefore be used with discretion.

A review of the essay of Dr. A. T. B. Merritt will be unnecessary, as it has been already published in the Recorder, in the volume for 1824.

The machine for the cure of aneurism of the brachial artery, by compression, cannot be understood without a plate. It reflects credit on Dr. Fahnestock, and is both ingenious and reasonable.

An interesting case is given by Dr. Church, in which the placenta adhered to the fundus of the uterus. A midwife, in attempting to draw away the placenta, inverted the uterus, fixed a ligature on the placenta, which was the state of things when Dr. Church was called. The woman was supported by stimulants, and the bleeding ceased: the uterus contracted on the introduction of the hand, and expelled the placenta; it however relaxed again; hemorrhage followed; ergot was given: it contracted again, stopped the bleeding, and the patient, by a judicious cordial and stimulating treatment, recovered.

A case of super-fœtation, by Dr. Fithian, follows, which suggests no remarks. The existence of this anomaly, we think, can now no longer be doubted.

ART. XVIII. *The North American Medical and Surgical Journal, No. 1.*

Description of a Febrile Disease near Savannah. By W. R. WARING, of Savannah, Georgia.—This disease was produced, in low and swampy situations, by a great accumulation of vegetable matter, during the winter and spring of 1825. The winter was so mild, that there was not a week between December and the first of March which was not equal to the production of the miasmata; so condensed were they, that they were appreciable from their horrible noxious smell. The disease was contagious; and the same person took it several times, though the susceptibility appeared to be diminished by a previous attack.

The symptoms were those of an irregular fever, of a typhous character, commencing with chill, lassitude, &c. exhibiting, in the course of its prevalence, abdominal or pneumonic irritation, according as the weather was hot or cold. Dissection also showed morbid alterations in the lungs, the intestines, and the stomach. The head also was affected. It bore a strong analogy, in many of its symptoms, to the yellow fever, and shows the effect of miasmata, modified by the mild winter of a southern latitude, in an interesting manner, and proves, we think, as forcibly as the nature of proof upon this subject admits, that the various grades of fever may be traced from the highest causus or yellow fever, and found to vanish, by imperceptible gradations, into the common remittents of the summer, when the heat, acting on susceptibilities of constitution augmented by the winter and spring, gives a more ardent physiognomy and inflammatory tone to the disease; or into the more debilitated varieties of the autumn, when the reduction of the temperature leaves the system without the support of this stimulus, and gives rise to typhus and all its different modifications. The treatment was judiciously conducted on the usual general principles.

Observations on a peculiar Catarrhal Complaint in Children. By JOSEPH PARRISH, M. D., Surgeon to the Pennsylvania Hospital.—This disease bore a strong resemblance to ordinary catarrh, but was attended with a pulse of rather more frequency than natural, in most instances feeble, with shrunk countenance, cold cheeks, and great debility: it was, in fact, a typhous catarrh. The dyspnœa is considerable, irregular in its accession, and appears to be spasmodic. It was treated successfully by antispasmodics and expectorants; assafœtida and ol. succini, the remedies most relied on, were given every two hours, with decoction of senega in the intervening hour, pushed so far as to produce vomiting if the symptoms were urgent. The volatile alkali was also used. These remedies, with purges, and blisters to the breast, and the warm bath, with the fumes of rosin inhaled by the patient, constituted the treatment. Dr. Parrish relates several cases of this disease in children of the same family, in whom, under the care of other physicians, it had been fatal, by pursuing the antiphlogistic plan. The disposition to it appeared to be hereditary in this family, and to prevent its recurrence, the surviving child was confined in an atmosphere impregnated with the fumes of rosin, with good effect. The disease, however, after a time, appeared in this infant; all idea of inflammation in the case was abandoned, from the examination of one of the children who had died previously, and the treatment was conducted on the above principles. The inhalation of the fumes of rosin gave immediate ease, and the remedies administered on the above plan happily effected the cure. The rage for treating all diseases of children by bleeding, when the lungs and trachea are involved, from the alarm and rapid fatality of croup, renders these observations extremely valuable.

Extirpation of an Ovarium. By ALLAN G. SMITH, of Danville, Kentucky.—In this case the ovary, which was scirrhous, was extracted by an incision from the umbilicus to the pubis; the tumour was removed, previously sur-

rounding it with a ligature of silk. The wound was closed with the interrupted suture, and the ligatures came away by the twenty-fifth day; the woman gradually recovered.

There are many cases of this operation on record: of those which are minutely reported, an account is to be found in the volume of the Recorder for 1825, particularly in a paper by the celebrated Lizars, of Edinburg, p. 19.

On the Mercurial Treatment of Syphilis. By Thomas Harris, M. D.—With the exception of three cases, in which alterative doses of mercury were prescribed, Dr. Harris has not used this medicine in any form of venereal for the last six years, during which time he has attended one hundred and sixty-four cases of this disease. He treated it by bleeding and purging, the warm bath once a week, and the decoction of the woods. The action of the skin is promoted by this means, and to this circumstance he attributes the rare occurrence of secondary symptoms in his practice. Poultices and cooling lotions, when there was much inflammation, afterwards a wash of calomel and lime water, a strong solution of blue vitriol, were the local applications; and if a powerful caustic be necessary, the nitrate of silver was used. In two cases of secondary symptoms which followed, nitric acid and the decoction of the woods were successful. Twenty-three other secondary cases were cured without mercury, after having been treated with that mineral by other practitioners. This testimony is certainly of great weight; but, with due respect to Dr. Harris, it must be observed, that though it sometimes fails, yet from the most ample experience in Europe, the present practice of Paris, England, Ireland, and the Continent generally, we must lean to the idea that its use, under proper regulations, must be always adopted, as the only safe mode of cure in these diseases.

Dr. Mitchell, of Philadelphia, gives the history of some observations on the use of a machine for the treatment of spinal distortions. It consists of a chair, with rollers attached to its feet, in the bottom of which a hole is made, sufficient for the reception of the body of the patient; a slide with a crooked bow, like that of the old fashioned machine, by which the support was thrown upon the pelvis, rising from the back of the chair, passes over the head, and supports the neck by bandages passed below the chin and occiput. Extension is made gradually, and the patient is kept in it for four hours, according to circumstances, an hour at a time. The usual remedies for assisting the constitution are then practised, for a detail of which, see the review of Bampfield, in a former number of the Medical Recorder.

This machine, at first sight, seems plausible; it differs from the old apparatus, which threw the weight of the spine and head upon the pelvis, in throwing upon the ground by attaching the steel rod (formerly fixed to the body) to the back of a chair, and thus by sliding up and down suspends the whole body by the head, and produces extension. Though it appears very reasonable at first view, the disease of the ligaments, usually attendant on these affections, we fear must limit its use to recent cases, and only those in which there is no inflammation. In anchylosis, where the union is weak, suspension by the neck must endanger fracture of the vertebræ; Dr. Mitchell adverts to this objection, and treats it lightly: it should be recollected by every person who ventures to use extension of any kind in these cases. Several instances of success are given; other remedies are used at the same time, particularly the purgative plan of Dr. Physick, which we believe of itself is sufficient.

Two cases follow, in which symptoms resembling catalepsy took place; in the one, there was some remains of sensation and thought; in the other, in which they were the result of taking laudanum, the symptoms of catalepsy were more decidedly marked: the last recovered. There was nothing peculiar in the treatment.

Dr. Mitchell, of Frankfort, relates some experience of the successful use of sugar of lead in dysentery and cholera infantum; as this practice is, with reason, believed to be hazardous, from the dangerous and terrible results of this remedy, we pass it over.

A paper on the theory of pain, by Dr. Pascalis, follows. As it is a subject which, of all others, we believe is the least capable of being considered in a theoretical light, this painful paper will not interest our readers by a review. We give the following as a specimen of the author's manner:

"6. Pain, inflicted by wounds, by fire, by blows, and by surgical instruments, seldom can disturb the laws of the animal economy. In those ages of ignorance, when torture was legally applied, in order to extort the confession of a crime, the jurisdictional practice was authorized by its harmless effect on health and life, unless it was continued too long, or produced organic lesions; for which medical men were appointed, to moderate or suspend an undue degree of it!!! Extended lacerations of flesh and limbs, deeply corroding ulcers, tearing and comminuting of bones, appear not to have any direct agency in producing disease."

The case of ecthyma cachecticum, by Dr. Hewson, exhibits a judicious and well selected use of the usual means prescribed for this typhous and cachectic form of eruptive disease. For a description of it, with a drawing, and the general plan of treatment, see the review of Plumbe's Essay on the Skin, in our January number for 1824. A diet of easy digestion, the warm bath, tonics, mineral acids, sarsaparilla in decoction, rest, antimonials, with the Lisbon diet drink, are the remedies recommended to benefit the patient.

Reviews and analecta conclude the number.

ART. XIX. *New-York Medical and Physical Journal, No.* 16, *for Oct. Nov. and Dec.* 1825.

DR. SMITH, of Yale College, New-England, gives a paper upon the treatment of fractures of the femur, with an account of a new splint. The difficulties which oppose the reduction of fractures are first stated: from contusions, and the consequent rigidity of the muscles, it is often difficult to reduce them, without an extending force; and if they be oblique, the extension requires great tact, and occasions a great deal of suffering. The bones may make an angle at the point of fracture; they may rotate by the weight of the foot; or they may be displaced laterally. To counteract these irregularities, the bone should be made one solid, unmoving piece.

It must be so placed as that the extensors and flexors exactly balance each other, to prevent lateral displacement. The patient should be so fixed as that he might be removed from one place to another without incommoding him. These are the principal objects to be attained in the treatment of fractures; they are so completely answered by Mr. Amesbury's apparatus, now so much applauded and used in London, that we cannot refrain from bringing it to the recollection of the subscribers to this Journal. The author goes on to state some inconveniences to be avoided, which deserve to be attended to, which are no less completely answered by the same apparatus.

1. When the limb rests upon a small part of its under surface, even though the support should be padded, the circumstance of the weight of the whole limb being borne up on one point produces inflammation. The support must bear equally on every part of the limb, then as each part presses with a small weight, it is immaterial whether the surface be hard or soft.

2. Lateral pressure, by splints and bandages, over the place of fracture,

galling and chafing it in particular parts; the suppression of the circulation in the parts below by bandages, from the erroneous idea that the pressure keeps the bones in their places; pressure to a degree sufficient to produce this end would arrest the circulation; and he thinks it doubtful whether any degree of pressure would produce this effect, because the motions of the foot or of the body would tend continually to displace the bones. By placing the whole limb in such a position as that the bones come into the proper and natural line, is the easiest mode; and that lateral pressure, as it acts to a disadvantage by affecting only the extremities of the bones, and not with the advantage of a long lever, can do little in preserving the natural place of the bones. In Desault's apparatus, the flexors and extensors are placed, from the straight posture of the limb, in unequal degrees of tension; the extensors are completely relaxed, and the flexors have a corresponding degree of tension; the latter become uneasy, and continually by making efforts have a disposition to displace the bones. The support of the limb being confined to a small part of its surface, though supported on cushions, is an objection. The support, also, from its not making part of the apparatus, does not move with it, nor accommodate itself to it.

The apparatus, which cannot be well understood without a plate, resembles somewhat that of Amesbury.

"It consists of two thin, broad pieces of wood,* so warped as that the concavity of one shall correspond to the convexity of the under surface of the thigh, and the other to that of the leg. The lower extremity of the thigh piece and the upper extremity of that of the leg, are joined together. This is done by paring out the margin of each of them, in the middle, so as to make them deeply concave. The projecting corners of the extremities, which are thus produced, are applied to each other, so that those of the thigh piece embrace and overlap those of the leg piece, and each pair being fastened together by a pin, performing the office of a pivot, a perfect hinge is produced, which admits of no other motion but flexion and extension. The superior margin of the thigh piece is then pared away, so as to adapt it to the shape of the pelvis against which its circumference rests. Where it presses upon the pubis and the tuber of the ischium, as it may be made to do, it should be bordered with soft leather, and stuffed. The leg piece is to be made longer and larger than the leg, and as its concavity cannot be exactly adapted to the convexity of the calf of the leg, this part of the limb is to be slung in the splint, by means of strips of cloth, or leather, which pass across it and hang loosely into its concavity, being attached to one side of the splint by tacks, and on the other by hooks or buckles, which will admit of their being tightened or loosened, as may be necessary, without disturbing the limb. The circumference of the thigh piece is to be a little less at the inferior than at the superior extremity, to adapt it to the tapering shape of the limb. A strap, passing from the upper extremity of the thigh piece to the lower extremity of that of the leg, will enable the surgeon to fix it at any angle that he pleases.

"In applying it, there may be laid along under the whole splint bands of firm cloth, long enough to embrace the splint and the limb. A broad linen cloth may be laid in the thigh piece. The limb is then to be carefully laid in the splint, the size of the one having been adapted to that of the other by measuring the sound limb; the linen cloth may be folded over the limb, and the whole splint then secured to it by overlapping and pinning the bands along its whole length from the hip to the ankle. As the pieces of the splint are flexible, they will be made by the bands to embrace the limb firmly enough, although they may not have been precisely adapted in size. In most instances in which the limb has been thus dressed, almost every

* Bass is that which I have employed, as being more flexible, and less liable to split than almost any other.

source of irritation being avoided, and the attitude natural and easy to the muscles, I have not found it necessary to use permanent extension. I am confident that the necessity for its use is often occasioned by the apparatus itself which is employed to effect it. Where, however, the fracture is very oblique, and the muscles are disposed to contract and shorten the limb, I have employed a mode of extension, which can be graduated to any degree of force, and which may always be made in the direction of the axis of the thigh bone. It is accomplished by lacing a soft band of leather round the leg, just below the knee, and to this attaching a cord, which is carried in the direction of the bone, over a pully in a stand nailed to the foot of the bed, and which may be lowered or raised at pleasure. To the end of the cord is attached a weight, equal to the necessity of the case. The weight of the body makes the counter-extension, which may be increased, if necessary, by raising a little the foot of the bed."

Dr. J. Hubble, of Westchester, New-York, states that the prænanthes altissimus, given for the cure of the bite of the rattlesnake, in infusion, and applied in a pounded state to the part bitten, completely succeeds: relief was immediate. As Dr. Hubble obtained these facts from persons who were unacquainted with medicine, and as the plant was completely inert to the taste, we should be disposed, like other stories of the same kind, to regard it as fabulous. The free use of alcohol, given in quantities to support the pulse, is a remedy more certain, and more under our control, than any other.

Theodore F. King gives an account of a disease produced by the ergot, taken in rye bread, in the New-York penitentiary. Brown spots on the legs, like a common bruise, restlessness and wakefulness, pains shooting up the thigh, were the symptoms. Some patients were not at all ill apparently, however the spots were found upon examination. The bread was discontinued, and they got well. It had been used for three or four weeks previously; after its disuse, in a fortnight they had nearly all recovered. Bark and wine seemed to give the greatest relief.

Dr. Hibbard gives some cases of hydrocephalus, treated successfully by blood-letting and cathartics, freely used. We refer to our volume of last year for some interesting cases of this disease, treated by bleeding to fainting, in Edinburg.

A tumour has been extracted from the antrum highmorianum, by Clarke Wright. The patient did well.

A case of fistula, communicating from the uterus to the bladder, after a severe labour, is also given. The child, in consequence of the narrowness of the pelvis, was delivered piecemeal; and a fistula, from the injury done to the parts, was the result. After delivery some months, the catamenia ceased; pains came on in the uterus, and, on examination, its mouth was found to be closed; on attempting to penetrate it with a catheter, it was found impossible; it soon burst, however, and discharged a matter resembling tar. The patient recovered from this affection, which no doubt originated from inflammation of the womb, closing up the os uteri.

Dr. Graves gives a case of carditis, which is somewhat novel. The patient at first was affected with liver disease, which had been excited into action by exposure to rain. On the second day of the attendance the disease was translated to the heart.

"Saturday, 10th.—Alarmed, upon visiting my patient this morning, to find the pulse extremely small, irregular, and intermittent; extremities

cold, and pain and tenderness of the abdomen, with constant eructations. Complained of pain, or rather stricture, over the sternum (appearing, from his description, like globus hystericus); his hurried breathing accompanied with rattling: he talked loud and incessantly, but rationally; yet he was so feeble as to be totally unable to move himself. Somewhat surprised at this combination of symptoms, after a few minutes I again felt his wrist, when I found that pulsation had entirely ceased; the temporals beat languidly, and the heart could scarcely be felt I immediately ordered mustard cataplasms to the abdomen and feet, an injection to be given, and the patient to take camphor grs. ij., c pulv. opii. gr. ss. every hour.

"Sunday, 11th.—Brimmer was somewhat easier; pulse stronger and more regular; heart beating with a deep, heavy stroke, and giving to the hand the sensation as if surrounded with cotton or wool; eructation lessened; pain and tenderness of the abdomen removed, he having had several discharges from the bowels; stricture over the sternum remained, but his breathing unaccompanied by any rattling. Ordered mustard cataplasms to the wrists, and those on the feet to be renewed; wine panada for his drink, and brandy and water every hour."

"*Dissection*—eighteen hours after death. Upon opening the sternum, the liver was found enlarged, and encroaching upon the thoracic cavity; the lungs were forced by this organ and the heart to the upper and posterior part of the thorax, where they were firmly held by one continued adhesion extending over their posterior surface; they were highly injected, and exhibited an inflammatory state: the heart was enlarged, inflamed, and laid transversely across the chest, its apex to the left side. A small quantity of yellowish, opaque serum was found occupying the anterior part of the pericardium. The pericardium was thickened, and attached to the heart by a firm layer of coagulable lymph, resembling in appearance the hard-boiled albumen of an egg. This layer is about half an inch in thickness, and is separable in two portions, presenting on the surfaces attached to the heart and pericardium a smooth and uniform appearance, but when lying together they are shaggy and roughened Between the outer or smooth surface and pericardium, there was a deposition of pus."

The review of the papers with plates are omitted, as they are not intelligible by description alone.

ART. XX. *The New-England Journal of Medicine and Surgery, for January*, 1826.

OUR cotemporary emaciates rapidly. The first article of the number, called Desultory Outlines on Animal Life, seems to be dictated in a spirit of sympathy with the general debility which pervades the frame of the work: it is written by Dr. North, and is a cold article.

The other original essay, by Dr. Hayward, upon the measles, is judicious and creditable. The idea that the measles is always a mild disease in this country, is one which should be adopted, like all others on the subject of fevers, with great limitation. Like all epidemics, it assumes a violent form occasionally, and in most cold climates it will be found to be inflammatory, and often dangerous.

ANALECTA.

I. Observations of Dr. Baillie, concluded from page 202.

Of some Affections of the Liver.

There may be, and often is, a deficiency in the quantity of bile mixed with the alvine evacuations, without any disease in the structure of the liver. The fæces are more or less pale; but there is no hardness nor fulness in the region of the liver. Every thing there, upon the most attentive examination, is discovered to be soft and perfectly natural to the feeling. Mild purgative medicines, with small doses of the pilula hydrargyri, are commonly very useful in such cases. Four or five grains of the pilula hydrargyri should be given every night for some time, and the purgative every morning, or every other morning. The mercurial medicine should not be carried so far as to make any impression upon the constitution, if this can be avoided: it is only intended to stimulate the ducts of the liver. The best purgative medicine, upon the whole, is the sulphate of magnesia in moderate doses, so as to produce two or three evacuations daily. When the alvine discharges have for some little time resumed their natural colour, the pilula hydrargyri should be given up.

Sometimes the bile discharged from the liver is of a dark colour, and the motions become darker than usual. The intensity of the colour differs very much in different individuals, and occasionally it is nearly as black as ink. The liver at the same time may be, and commonly is, quite sound in its structure. The treatment should in this case be in a great measure similar to that in the former, but a little more active. Small doses of calomel may be used instead of the pilula hydrargyri, and the purgative medicines may be a little more powerful. When the colour of the motions has for a short time (eight or ten days) become natural, the calomel may be given up; but the purgative medicines may be continued longer, at somewhat greater intervals—as, for instance, every third day. Where the motions are very green in their colour, magnesia or some alkali may be mixed with the purgatives. In the above cases the Cheltenham and Leamington waters have been often very useful; but I think that many practitioners of the present day have erred in administering mercury too long, and in too liberal doses. When mercury is carried beyond the point that is necessary, it often injures the constitution by weakening it, and by rendering the nervous system very irritable.

There is sometimes a greater fulness, and greater sense of resistance, over the whole region of the liver than natural, with more or less of tenderness upon pressure. This arises from some chronic inflammation of the substance of the liver. In such a case, the repeated application of leeches to the seat of the liver, and the occasional application of a blister, are often of the greatest use. A mild course of mercury should be recommended, so as in some measure to affect the constitution; and this should be administered both externally and internally. It should not, however, be carried beyond the necessity. Long and repeated salivations will seldom be re-

quired, and often have done much and permanent injury to the constitution. When the liver has become soft, has lost its tenderness, and resumed its natural size, the mercury may be given up. If the liver shall not have returned altogether to its natural state, and the constitution appears to be suffering from the course of mercury, a seton may be inserted under the skin in the region of the liver, and the mercury may be given up or suspended. In some cases I have found a fulness of the liver, which had eluded the effect of mercury, to be removed by a seton. The administration of purgatives is of great advantage in all such cases, and the Cheltenham waters are often highly beneficial.

Of Abscess in the Liver.—Inflammation of the liver will occasionally terminate by forming an abscess. The abscess will in time break externally, or it will communicate with the lungs, with the stomach, or with both of these viscera. When the abscess breaks externally, the part gradually heals, unless there be something very unfavourable in the constitution; and the patient recovers entirely. When the abscess communicates with the lungs, the matter is brought up by coughing, and the patient, if prudent in the management of himself, and possessed of a tolerably good constitution, will sometimes at last entirely recover. When the abscess communicates with the stomach, the matter is sometimes discharged by vomiting, and sometimes by the bowels. In this case, too, the patient will not unfrequently recover; and the same observation may be extended to an abscess of the liver which communicates both with the stomach and the lungs, although the circumstances are more unfavourable in this than in the other two cases. In these various cases little benefit is produced by medicine, but great injury may be done by imprudent or unskilful management. The bowels should be kept always free from costiveness: if there be any considerable feverishness, it may be lessened by saline draughts; or, if the constitution be weak, it may be strengthened by the prudent use of tonic medicines. The diet should be light and nourishing, and in general wine should be avoided. The exercise, if the weather be favourable, should be gentle; but it should not be taken at all if the weather be ungenial, or if it be attended with pain or much fatigue. A stimulating diet, too much or too violent exercise, and exposure to a cold atmosphere, may do much mischief, or even lead on to a fatal event.

Of Tubercles in the Liver.—Tubercles of different kinds are formed not unfrequently in the liver, at a middle or more advanced age. They are often connected with an intemperate mode of living, but they will sometimes occur in persons who have passed an uniformly temperate life. They are frequently the cause of ascites, but sometimes they do not produce this effect. No medicines, as far as I have seen, are attended with any permanent benefit in this state of disease. By temperate living, by gentle exercise, and by the bowels being kept rather open, patients will not unfrequently live for some years with such complaints; but I do not recollect any instance of a patient actually recovering from them.

Of Hydatids in the Liver.—I have known only two instances of this disease in the living body. The one was in an old lady, who had been subject from time to time, for many years, to symptoms very much resembling those of gallstones. At length, after a more severe attack than usual, the constitution gradually sunk, and she died. Cysts containing hydatids were discovered upon examination of the body after death.

The other case was that of a young lady, who had suffered occasionally a good deal of pain in the region of the liver, and at length passed some hydatids by stool. She for the time recovered, but what became of her afterwards I have never learned. It is obvious that the formation of hydatids in the liver, even when the existence of this disease can be perfectly ascertained in the living body, can receive no essential benefit from medicine. If inflammation should take place in the progress of this disease, it may be

removed or lessened by taking away blood from the arm, or topically; and if at any time violent pain should occur, it may be mitigated by opium and the warm bath. The bowels should be kept rather open; and there will always be some advantage in patients affected with this disease living temperately. Patients may live many years with this complaint; but, if it be gradually making progress, even though slowly, it must, in almost every instance, have ultimately a fatal termination.

Of Gallstones.—The formation of gallstones in the ducts of the liver, or in the gall-bladder, is not a rare disease, and I have known many instances of it. The paroxysms of this complaint are generally attended with exquisite pain; but I have known a few cases where the pain has been moderate. Some cases I have likewise known where patients have been subject to symptoms of indigestion for many months, without paleness of the stools, yellowness of the skin, or any other symptoms which denote the existence of gallstones; yet this condition of the stomach has ultimately led on to the symptoms of gallstones being formed in the most distinct manner. It is obvious that no solvent can be successfully applied to a gallstone within the living body. While the symptoms of gallstone exist, it must either be in some duct of the liver or in the cystic duct, or in the ductus communis choledochus. But a solvent introduced into the stomach cannot come in contact with a gallstone in any of these situations. As soon as a gallstone drops into the duodenum, where a solvent might reach it, all symptoms belonging to gallstones immediately cease; and for the time the patient becomes quite well. In the treatment of gallstones, therefore, the symptoms can only be mitigated by medicine. If any inflammatory symptoms have been produced, which is sometimes the case, they can be removed or lessened by general and topical bleeding. The exquisite pain which is commonly felt during a paroxysm of gallstones, can be generally mitigated by large doses of opium, by fomentations, and by the warm bath. Purgative medicines should be given, of sufficient power to counteract the effects of the opium. Mercury appears to me to have no power over a pure case of gallstones, unmixed with any fulness or hardness of the liver; and the Cheltenham or Leamington waters are of much less advantage than in the more ordinary cases, where the functions of the liver are merely deranged. No particular mode of life will protect a patient against the recurrence of gallstones; but there is always some advantage in such persons living temperately, and keeping their bowels free from costiveness.

Of some Diseases of the Pancreas.

The pancreas is, upon the whole, less liable to disease than any other important gland in the body. I do not recollect that, in private practice, I have met with one case in which there was satisfactory evidence of the pancreas being diseased; and I have only known of a solitary example of it during the thirteen years in which I was a physician of St. George's Hospital. This case was under the care of another physician,* and the pancreas was not known to be diseased till the patient's body was examined after death. The pain in the epigastric region, sickness, uneasiness or pain in the loins, which belong to inflammation and enlargement of the pancreas, belong also to other diseases, and therefore do not particularly indicate a disease in this important viscus. Were the enlargement so great that it could be ascertained by an attentive examination of the living body, no difficulty would remain in ascertaining the disease. This, however, will very seldom happen; for I have not found a single instance, in all the dead bodies which I have examined, of the pancreas being so large, that it could have been ascertained by the most careful examination in the living body. If the pancreas were to

* Dr. Heberden, jun.

be much increased in size, and the patient much emaciated, so as to ascertain this disease while the patient was alive, it would probably be in general too late to receive any substantial benefit from medicine.

Calculi formed in the ducts of the pancreas, constitute a still rarer disease than the inflammation or enlargement of this gland. I have not myself met with any instance of it in the living body, nor do I remember to have heard any physician say that he has seen this disease. While the calculi remain within the ducts of the pancreas, it is evident that no solvent could reach them; and, if they should be discharged into the duodenum, there would be a cessation of the disease for a time.

Of some Diseases of the Spleen.

The spleen is much less subject to inflammation than many other of the abdominal viscera. I do not recollect a strongly-marked instance of it in my practice; and I have never met with an abscess in the spleen in all the dead bodies which I have examined. The peritoneum is not uncommonly inflamed in that quarter, and the coat of the spleen is more or less involved in the inflammation. I am not aware that inflammation of the spleen would require a different treatment from that of other viscera.

I have met with several examples of enlargement of the spleen. The enlargement has been very different in different patients. In some the spleen has not been more than twice its natural size, and in others it has been so large as to occupy nearly all the left side of the abdomen, extending from the diaphragm to the pelvis. When the enlargement is so considerable that the lower end of the spleen can be felt under the margin of the ribs upon the left side, there can be no doubt with respect to the disease. The spleen, when enlarged, is always felt to be harder than in a natural state, but pressure upon it with the hand seldom produces pain. An enlargement of the spleen is sometimes followed by ascites; but there will frequently be no dropsy of the abdomen, even where the spleen has been for a long time much enlarged. Where enlargement of the spleen has been connected with ague, it more frequently subsides than in any other case: where the enlargement has taken place independently of this cause, it hardly ever subsides of itself, or is materially diminished by medicine. According to my experience, mercury, administered both externally and internally, produces very seldom any good effect: I have seen, I think, more advantage from a seton inserted under the skin which covers the spleen. In some cases it has appeared to be diminished in size by this remedy, and to be rendered softer: but I do not recollect a single instance, except after ague, in which it has been reduced to nearly its natural size. Temperate living, abstaining from violent exercise, and keeping the bowels open, must be to a certain degree useful in retarding the progress of the disease.

I have not met with any case of hydatids being formed in the spleen, but such a disease now and then occurs. A patient may live very long with this complaint; but it can receive no cure, nor even amendment, from medicine.

Of some Affections of the Kidneys.

The kidneys are more liable to disease than most other glands of the body, and are more frequently diseased in men than in women. This may arise from greater intemperance in the former than in the latter sex, and likewise from the more violent bodily exertions which men are often called upon to make. I have known a few instances in which the two kidneys entirely lost the action of separating urine; and this has been chiefly in persons advanced in life. The patients soon became very comatose, and died in the course of two or three days. No medicine was of the least advantage; and every case, as far as I recollect, terminated fatally. There is a great difference, in the

hazard of a patient's situation, whether the kidneys separate a little urine or none at all. In the first case they generally recover, and in the second very rarely. It is curious that life should terminate so soon when the functions of the kidneys have become totally suspended. A person who receives no nourishment whatever into the stomach, or by any other means, will live much longer.

Of Abscesses in the Kidneys.—When inflammation of the kidney has not been removed by the usual means, an abscess takes place in it. The pus which is formed is sometimes of a common kind, but is often of a strumous nature. It comes away along with the urine, in greater or less quantity; and this circumstance, together with the history of the case, ascertains in the most satisfactory manner the nature of the disease. The kidney in such cases is sometimes nearly of its natural size, but is often much enlarged; and this circumstance can be ascertained by an examination in the living body. Patients will continue to live with this complaint for many months, and even for several years. The formation of matter will sometimes be suspended for several months, and patients will recover in a considerable degree their general health. The disease will return, either from imprudence in diet or exercise, or without any known cause, and the patient will become as ill as ever. It very rarely happens that a patient permanently recovers from this disease, and I do not at present recollect an instance of it. Medicines, as far as my experience has reached, do not produce any great or permanent good effect. A seton inserted in the loins, or in the flank of that side where the diseased kidney is situated, is sometimes of considerable use. The uva ursi, and the tinctura benzöes composita, have sometimes been serviceable as internal medicines. The same observations may extend to cooling and mucilaginous remedies. Great quiet of body and uniform temperate living are useful in mitigating symptoms, and in retarding the progress of the disease. A patient labouring under this disease should live almost entirely upon vegetable food, and should abstain from wine and other fermented liquors.

Of Hydatids in the Kidneys.—This is a very rare disease, but I have known two or three instances of it. Its existence cannot be ascertained in the living body, unless an hydatid should occasionally be discharged along with the urine through the urethra. A patient may live very long, perhaps a good many years, with this disease, but it cannot receive any advantage from medicine.

Of Calculi in the Kidneys.—One of the most common diseases of the kidneys is the formation of calculous matter in them. This may either be in the form of sand, producing in the kidneys temporary irritation; or in the form of a calculus, which may either produce temporary irritation, or a permanent and fatal disease. When the calculus is small and of a favourable shape, it may pass by one of the ureters into the bladder, and be altogether discharged from the body by the urethra. When the bulk of the calculus is considerable, and more especially if it be of an aborescent form, it cannot pass into the bladder, but must remain in the kidney, or in the pelvis of the ureter very near the kidney, producing there more or less of irritation, frequently some degree of inflammation, and not unfrequently an abscess. The existence of a calculus in the kidneys may be guessed at, with high probability, from the symptoms; but it can only be perfectly ascertained when sand, or small fragments of calculous matter, are occasionally discharged through the urethra. In the treatment of this formidable complaint, symptoms of inflammation, when present, should always be promptly removed by general and topical bleeding, by cooling and mucilaginous medicines, and by mild purgatives. When the inflammation is removed, the proper medicines should be determined by the nature of the calculus, where this can be ascertained. If the calculus be of the common kind, (consisting chiefly of the lithic acid,) magnesia and alkaline medicines should be given,

and be continued for a great length of time. If the calculus should consist of the triple phosphate, moderate doses of some of the mineral acids, properly diluted, should be given; and of these the muriatic acid is perhaps the best. I do not recollect any instance in which patients have by these medicines been permanently cured; but I have not unfrequently known the symptoms very much mitigated by them, and even for a time suspended.

Patients labouring under this complaint should live with great temperance, but should adopt chiefly a light animal diet, becaue if acid be formed in the primæ viæ in considerable quantity from vegetable food, the symptoms of the complaint will probably be aggravated.

Of Hemorrhage from the Kidneys.—I have known a few cases in which blood has been discharged from the kidney, and has passed out of the body, along with the urine. In most of these cases the quantity of blood has been large, amounting often to nearly a pint at a time, so that the mixture of urine with the blood hardly appeared to dilute it. The recurrence of the bleeding is commonly very frequent, and the disease will often continue, with intermissions for several weeks. The loss of blood must arise from one or more considerable vessels being ruptured in one or both kidneys; but I believe that generally one kidney only is affected. The blood-vessels of the kidney may be so distended with blood, that one or more of them may burst; or the sharp edge of a calculus may cut through one or more of them, and in this way occasion the hemorrhage. Whether the hemorrhage has been produced in the one way or the other, can generally be determined by an accurate attention to the history of the case.

General and topical bleeding, but more especially the latter, are sometimes of great use in mitigating the disease. Cold applications to the loins and belly are also very serviceable. As internal medicines, nitre, the diluted sulphuric acid, and the tincture of muriated iron, have often produced great benefit. The last medicine has, I think, upon the whole been the most useful.

The patient should be kept perfectly quiet, the chamber cool, and the diet for a time should consist entirely of vegetable substances. I do not recollect any instance in which the patient has not recovered from this complaint, when it has not been connected with an abscess, or some other formidable disease of the kidney.

Of Diabetes.—I have, in the course of my medical life, seen a good many instances of this formidable disease. Of late years a considerable proportion of such cases have got well under my care, or have had the symptoms very much mitigated. The most successful plan of treatment has been to give considerable doses of opium, combined with rhubarb or some other bitter: fifty drops of laudanum, for instance, may be given three or four times a-day, mixed with some infusion of rhubarb or infusion of calumba. The rhubarb may also be given separately, in the form of pills. Under this treatment the disease will often gradually subside, and at length cease altogether. It is, however, very apt to recur; and therefore this plan of treatment, in more moderate doses, should be continued for some months after the patient is apparently well. Bleeding from the system generally, and topical bleeding from the loins, are often useful; for the blood-vessels of the kidneys in this disease are generally more or less distended with blood. The diet should be temperate, and should consist chiefly of animal food; and the best kind of drink is, upon the whole, Bristol water.

Of a loose Tumour in the Region of the Kidney.—In four or five instances I have felt a loose tumour in the situation of one of the kidneys, which could be easily moved up and down with a slight pressure from the hand. The tumour is of considerable firmness, and has a good deal the shape and size of the kidney. It is attended with very little uneasiness to the patient, and the general health is very little, if at all, affected by it. When felt in women, it has been mistaken for an enlarged ovarium; but it has neither the shape of an enlarged ovarium, nor is it in the situation in which an enlarged ovari-

um is commonly found. I have not had an opportunity of examining this disease in the dead body; I am therefore not certain about its nature, but I am rather disposed to think that it is a kidney more loosely attached than usual to the subjacent and surrounding parts.

Of some diseased Affections of the Urinary Bladder.

It is not unusual for the urinary bladder to become for a certain time paralytic, and to lose its power of expelling the urine. This is more apt to occur in young women than in any other persons, and for the following reason:—The complaint is generally produced by the calls to evacuate the urine being resisted, so that the muscular coat of the bladder becomes very much stretched in consequence of the accumulation of the urine. By the stretching of the muscular coat, its power of acting is for a considerable time lost, and is only gradually recovered. Young women, from being long in a carriage or long in company, and from their natural modesty, often resist the desire to evacuate the urine for such a length of time, as to induce a paralytic state of the muscular coat of the bladder. Older women manage this function more wisely; and men are not much exposed to the causes which induce them to resist the desire of evacuating the urine. When this disease has taken place, and is not accompanied with any morbid change of structure in the bladder, the bladder gradually recovers its power by the water being regularly drawn off twice or thrice in twenty-four hours, for some weeks. Women may soon be taught to draw off the water themselves, so that they may avoid the very distressing assistance of a surgeon, as well as have an opportunity of relieving themselves whenever there is the least painful distention of the bladder. Internal medicine is of no use in this complaint; but the diet should be temperate, and drink should be taken sparingly.

The bladder will sometimes have only its sphincter muscle paralytic, while the muscular coat of the bladder shall retain its natural power. This complaint prevents the water from being properly retained; and, when there is a certain accumulation of urine in the bladder, it passes off involuntarily. This species of complaint is more common in persons advanced in life than in young persons, and more common in men than in women. The sphincter muscles generally throughout the body become more weak at an advanced period of life; and the bladder of men is more exposed through life to the causes which impair its powers than that of women. When this disease has taken place, it is seldom entirely cured. It is occasionally benefited by small blisters being applied to the perineum, or near the neck of the bladder. Tonic medicines of different kinds, and proper doses of the tinctura lyttæ, are sometimes attended with advantage.

Of a diseased Secretion from the Bladder.—The inner membrane of the bladder, more especially near its neck, has the power of secreting mucus, and is always secreting it in a small quantity, in order to protect the internal surface of the bladder against the stimulus of the urine. This secretion is sometimes very much increased in persons at a middle or advanced age, and is a good deal altered in its properties. Instead of being in a great degree transparent and void of colour, it becomes opaque and yellow, so as very much to resemble pus. It becomes what is now generally called purulent mucus, and will often be nearly equal in quantity to the urine itself. When the urine has been evacuated, and has been allowed to rest in a vessel for a little time, the purulent mucus subsides from the urine, and often adheres with considerable tenacity to the sides of the vessel. This mucus is often formed without there being any morbid structure in the bladder, or any substance contained in the bladder which produces irritation; but it almost constantly attends, more or less, the presence of a calculus there.

When this complaint is independent of a calculus, it commonly receives

but little benefit from medicine. The balsam of copaiba, the uva ursi, and soda, sometimes appear to be useful, but they very seldom produce any considerable or permanent good. When the existence of a calculus in the bladder is the cause of the disease, the removal of the calculus will effectually cure it.

Of a Calculus in the Bladder.—When a calculus is in the bladder, the disease can in general be ascertained by an accurate attention to the symptoms; but it can always, or almost always, be ascertained in a satisfactory manner, by a sound or catheter being introduced into the bladder by an experienced surgeon. I have known a good many instances in which this disease has been alleviated by medicines, but none in which it has been cured. Mucilaginous substances, fomentations, opiates, magnesia, and alkaline remedies, are sometimes of considerable use in lessening the symptoms. Where the calculus has been ascertained, by portions of it, or by gravel, which may have been occasionally discharged with the urine, to consist of the triple phosphate, much advantage has sometimes been derived from taking moderate doses of muriatic acid properly diluted.

Of a Communication by Ulcer between the Bladder and the Rectum.—I have known two cases of this kind; one of which was in a man, and the other in a woman. They both lived between two and three years, but they died from the consequences of the disease. Both sometimes suffered considerable pain in the very lower part of the abdomen, but they were both often quite free from pain for many hours together. The pulse was sometimes of a natural frequency, and sometimes was accelerated. It hardly ever happened that urine escaped from the bladder into the rectum, but very often air escaped from the rectum through the urethra; and frequently more or less of fæces was discharged by the same channel. Whenever fæculent matter was discharged by the urethra, great pain was felt about the neck of the bladder. It is very obvious that medicine could be of no substantial use in those cases. Opiates, fomentations, and mild purgatives, sometimes produced an alleviation of the symptoms; but the constitution became at length very much exhausted, and the scene was then soon closed.

Of some diseased Affections of the Womb.

One of the most common diseases of the womb is prolapsus uteri. It is in very different degrees in different individuals. In some the womb is only a little lower in its situation than it ought to be, but the mouth of the womb is still considerably within the vagina. In others, the neck of the uterus shall be at the external opening of the vagina; and in a few, a considerable portion of the womb shall be without the body.

According to my experience, this disease, when in a considerable degree, is often very imperfectly relieved. When the degree of it is slight, and the vagina not very relaxed, the complaint may sometimes be removed by a horizontal posture being continued throughout the greater part of the day for several months, by the judicious use of tonic medicines, and by astringent fluids being injected into the vagina twice a-day. In a moderate degree of the prolapsus, pregnancy taking place has often proved the means of curing the disease.

When the prolapsus is in a great degree, both internal and external remedies have been generally of little use. The inconveniencies, however, of the disease may in a great measure be prevented by a pessary being constantly worn in the vagina. When the pessary is well adapted to the circumstances, it does not produce pain, and in time the patient is hardly sensible of its presence. I need not say that the pessary should be removed for a few minutes every two or three days, in order that it may be cleaned and not produce irritation.

Of Polypus of the Womb.—This disease, although by no means so common

as the former, is not very rare, and I have not unfrequentiy been consulted about it. If the symptoms be not inquired into with some attention, it may be confounded with the malignant ulcer, or what is usually called cancer of the womb; but a minute inquiry into the symptoms will enable the practitioner, in most instances, to distinguish between the two diseases. When an examination has been made per vaginam, no doubt can remain; and therefore, before an opinion is decidedly given, an examination should always be made.

In this disease no permanent advantage is gained by medicine. The strength of the constitution may be a little kept up by tonic and astringent medicines, and the profuse discharges of mucus and blood may be moderated by the application of cold and astringent fluids: but the disease can only be removed by an operation, which consists in tying the neck of the polypus by a ligature. This can be done safely, and with great dexterity by many practitioners in midwifery. In a few days after the operation, the polypus drops off, and the patient gradually recovers her usual health. In many instances the polypus does not return; but a new polypus is occasionally formed, which in due time may be removed by a similar operation.

Of Cancer of the Womb.—This disease is not uncommon, more especially at the middle and more advanced periods of life, and I have frequently been consulted respecting it. I have never known any medicine produce the least real amendment of the disease. Opium and other sedatives will not unfrequently relieve the greater attacks of pain; and in that way will prevent the constitution from being so soon worn down by the disease. It is to be observed, however, that different women suffer naturally very different degrees of pain in this fatal disease, and that its progress is much more slow in one woman than another. The diet should always be very temperate, consisting chiefly of vegetable substances, and the patient should abstain from wine and other fermented liquors.

Of an Enlargement of the Womb.—This disease is not uncommon, although by no means so frequent as cancer of the womb. It is more apt to occur at or near the middle period of life than at any other, and may be distinguished by a moderate attention to the circumstances of the case. There are considerable mucous diacharges by the vagina, as in some other diseases of the womb, and the monthly evacuations are profuse. When the disease has made some progress, a tumour of a pyramidal shape, and of considerable hardness, may be felt immediately above the pubes. The neck of the uterus is likewise found to be enlarged, by an examination per vaginam. These circumstances sufficiently characterize the disease. It generally continues for many years, and the general health is often not much affected by it. In the course of my experience, I have known three cases of this disease cured by medicine. Five or six grains of the pilula hydrargyri were directed to be given every night for many weeks; from half a pint to a pint of decoction of sarsaparilla was ordered to be drank daily; and a large mercurial plaster was applied over the tumour and the whole lower part of the abdomen. The disease in these instances gradually subsided, and at length disappeared altogether. One of these patients, who was about thirty-five years of age, afterwards became pregnant, and bore a very healthy child.

Of some diseased Affections of the Ovarium.

The most common disease of the ovarium is that of its being dropsical. It may take place at almost any period of life. It is not unusual in young women, and often occurs about the middle age. This disease may, in general, be readily distinguished from ascites, by an examination of the swelling, which is almost constantly more or less uneven upon its surface, and often more or less hard in different parts of it. Sometimes, however, in dropsy of the ovarium, when the disease is of considerable standing, the swelling is uniform, and a sense of fluctuation is felt upon striking the tumour with

the hand, almost as distinctly as in ascites. Under such circumstances, the two diseases will be distinguished from each other by inquiring accurately into the history of the case.

I do not recollect any instance in which dropsy of the ovarium has been materially diminished by medicine. I have long, therefore, given up the trial of active remedies in this disease, which I have found to be ineffectual, and sometimes injurious to the constitution. I have contented myself with keeping the bowels regular, and with directing such diuretic medicines as would not impair the general health. I have not found mercury, even when continued for several months together, and having its full influence upon the constitution, produce a cure, or any material change in this disease. The disease will sometimes remain stationary for a good many years, and the general health will be very little impaired by it. In one instance, after it had existed for nearly thirty years, the disease disappeared spontaneously, and the lady, who is still alive, remained afterwards in good health. In three cases, where the women were young, and the dropsy confined to one large cyst in the ovarium, I have known them to be effectually relieved by tapping, and the disease not to return for several years. In one of these the dropsy did not return for ten years. Where the patient is young, and dropsy of the ovarium under favourable circumstances, it is always worth while to make a trial of this remedy. When the dropsy of the ovarium is composed of several cysts, the disease may be partially relieved by tapping; but it almost constantly returns, and after a certain time very rapidly, so that there is only a short interval between the operations. Still, however, some relief is afforded by each operation; and patients will be ready to undergo the operation for this relief every two or three months for several years.

A firm swelling, about the size of the fist or a large orange, is sometimes to be felt in the situation of the ovarium, either upon the right or the left side of the abdomen. It will sometimes remain stationary, will sometimes go on enlarging to a much greater size, and is not, as far as I have seen, suppressed by any remedy. This solid structure of the ovarium is found not uncommonly blended with the dropsical cysts which have been lately mentioned.

2. *Fistula between the Bladder and Vagina cured.*—In the London Medical and Physical Journal, Dr. Hobart, of Cork, gives a case of fistula communicating between the vagina and bladder, in consequence of injury done during delivery by instruments.

"The plan recommended by Desault of introducing a pessary into the vagina, and keeping a catheter in the bladder, was adopted, and persisted in for two months, without the slightest improvement. The edges were likewise touched with caustic, which was ineffectual, because the parts were not kept in actual contact for a sufficient length of time to cause their union. The case was then looked on as utterly hopeless, and she remained in the wretched situation above stated until I saw her. The actual cautery had been applied a few weeks before she came under my care, but was not productive of any advantage.

It appeared to me that, if I could keep a catheter constantly in the bladder, and bring the edges of the opening together by means of the bloody suture, after having destroyed the surface with caustic, they would unite. It was exceedingly difficult, in consequence of the depth of the opening in the vagina, to apply the suture: for this purpose I contrived an instrument for passing the needle through the lips of the wound, which answered my utmost expectations. This instrument (as represented in Fig. 1,) consists of four parts: a silver tube, or canula, A, about seven inches in length, and of the bore of a small goose-quill; a steel rod, B, passing through the tube freely, but fitting the bore accurately, about two inches longer than the tube, and terminating in a ring at the top, and a hook of peculiar form at the point, as more fully described in the accompanying drawing. On the

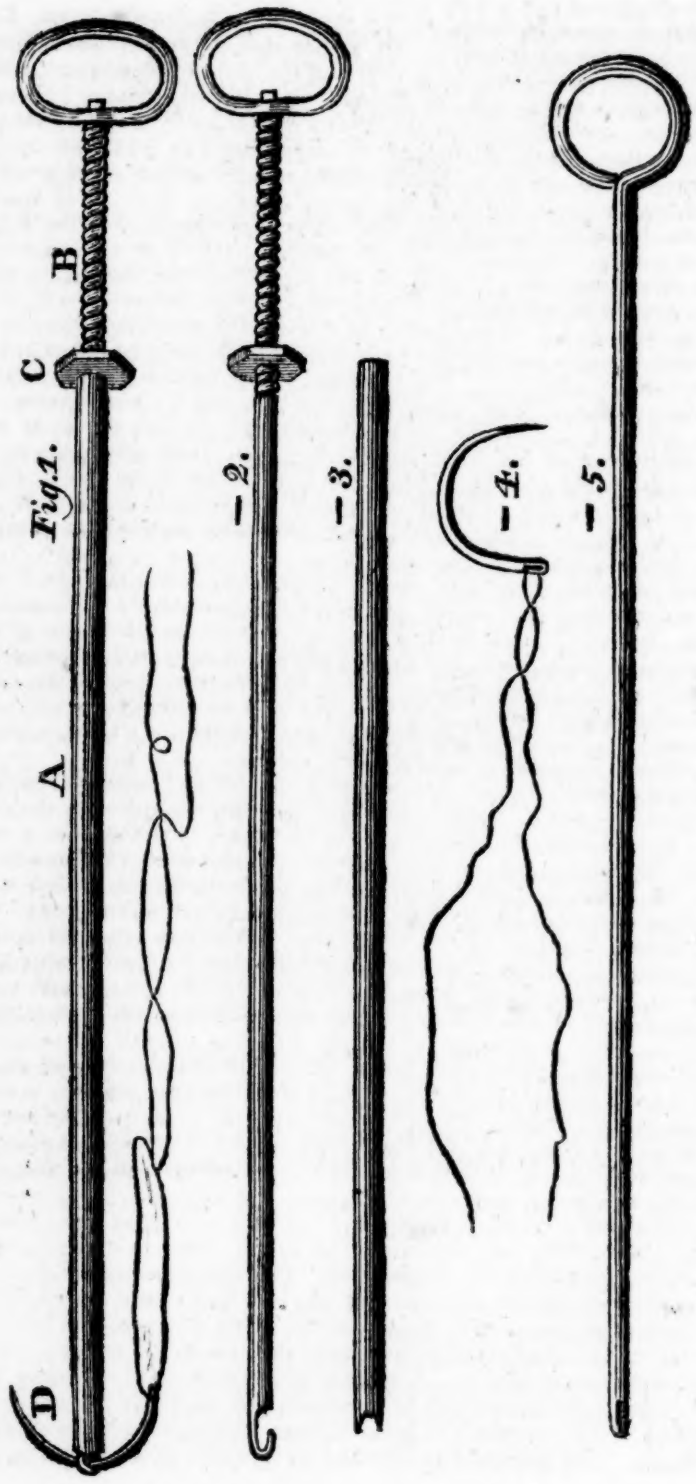
rod, for about two and a half inches from the ring, is cut a screw, for the nut C to traverse upon. This steel rod, B, is introduced through the silver tube, A, until the hook at the end appears; which hook seizes the curved needle, D, and, by drawing up the rod, the needle is held tight across the end of the tube, where two notches are made (as in Fig. 3,) for its reception, and where it becomes firmly fixed in any position the operator chooses to place it, by screwing forward the nut, C, on the rod, so as to press upon the needle at the end of the tube.

The mode of using this instrument will, I think, be easily understood. The patient being properly placed on her knees, with her head as much below them as she can bear, and the parts to be united by the ligature being previously brought to a proper state; the vagina is then dilated by Weiss's speculum, which is held by an assistant, whilst the operator introduces the instrument represented in Fig. 1, (with the convex surface of the needle to the sacrum,) through the posterior edge of the wound. He then loosens its hold, by unscrewing one or two turns of the nut, C; and, having with a long forceps drawn the needle through, re-adapts it, and proceeds to pass it through the near or pubal edge of the opening. The needle having been brought through as before, it is again to be fastened at the end of the rod, so as to enable the operator, with the aid of the instrument marked No. 5, to fasten the ligature over the wound, in the same manner as uterine or nasal polypi are secured.

With regard to retaining the catheter constantly in the bladder, I accomplished that very material point in the following manner:—I procured an oval shield of wood, about three inches in diameter, in the centre of which I made a small hole, in which was fixed firmly the open end of the catheter; and, by means of a single tape fastened to this board below, and a double one above, I secured the catheter in its place, by passing the single tape between the nates, and fastening it and the two others to a band, which was passed round the waist for that purpose.

I found it necessary to apply the lunar caustic several times, as the sloughs were thrown off irregularly, and as it is absolutely necessary that the surface should be completely granulating all round the edges before the parts are brought into apposition. When the edges of the wound were in a fit state, I applied two ligatures made with strong silk, saturated in melted wax, to prevent the incrustation of calcareous matter, the disadvantages of which are obvious. The ligatures were allowed to remain in fourteen days, and were then removed with the greatest facility, the wax having completely prevented any earthy deposites. In three days after, the catheter was removed; when the urine flowed through the urethra, without escaping into the vagina.

In consequence of the necessity of wearing the catheter so long, and thus rendering the sphincter of the bladder in some measure passive, it did not recover its powers for several days. She is now able to retain her urine for many hours; and I have no doubt, that by the aid of cold bathing and other tonics, the full and healthy action of this viscus will be completely restored."


A
B
C
D
Fig. 1.
2.
3.
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3. *On the good effects of Sal. Ammoniac, in large doses, in a case of dangerous obstruction of the Esophagus, arising from disorganization.* By Dr. Anton. Friedrick Fisher, of Dresden.—Dr. Fisher states, that ever since he was so fortunate as to discover the happy effects of the muriate of ammonia, administered in large doses, in cases of diseased prostate and urinary bladder, he has directed much attention to the effects of that medicine upon other disorganized organs, particularly those of membranous or glandular structure. A female, who had laboured nearly twelve months under an obstruction of the esophagus, was destined to the operation of the muriate of ammonia. This was the eighth case of the kind which had come under Dr. F.'s care in the course of twenty-three years' practice. He lost all those before treated according to the rules of the art, under the most distressing circumstances, such as actual starvation and emaciation to the last degree, notwithstanding the constant administration of the much boasted injections of broth with yolks of eggs, washing the body with strong wine, and frequent baths of strong malt decoctions. The celebrated mercurial treatment, both internally and externally, burnt sponge, acetated kali, conium maculatum, belladonna, resolving gum-resins, extract. resolvens, genuine Carlsbad waters, and consultations of the most skilful physicians, were all unable to check the disease; to say nothing of their not being at all likely to effect a cure. It was in vain to make a trial of medicines already tried and found ineffectual. The muriate of ammonia inspired Dr. F. with slight hopes of relieving the patient, who was sixty-four years of age, descended from healthy parents, and had enjoyed, from her youth, almost uninterrupted good health. When quite young she taught dancing, and subsequently the learned languages. In her fifty-first year, in consequence of distress and trouble, she complained of indigestion, and shortly after of constipation, associated with obstruction of the portal system. To counteract this state of body, frequent drastic purges were used; these brought on hæmorrhoids, which relieved in a measure. She found her situation quite passable till her sixtieth year, when she had frequent attacks of gout, and was in the habit of poulticing the parts attacked with various substances, and taking diaphoretic medicines. This treatment was generally successful in relieving the symptoms of the gout. The patient complained for the first time, in the spring of 1824, of difficult deglutition, which increased so very slowly that it occasioned no alarm, she believing that it depended upon her having swallowed too precipitately, at some unknown time, a mouthful of food, and that the inconvenience would disappear after a short time; but in this expectation she was disappointed, her deglutition becoming daily more difficult, until she was unable to swallow liquid nourishment without the greatest efforts. The patient referred all her sufferings to an apparent lump about an inch above the cardia, where it appeared to her the food was arrested in its course, and pressed downwards with great force. Glandular disorganization was considered to be the cause of the dysphagia, and that was supposed to have arisen from the gouty affection, which had not appeared in its usual form from the time of the first symptoms of difficult deglutition. A blister was placed upon the chest corresponding to the diseased spot, and very small pills composed of guaiac. antimonial soap, extract. aconit. and camphor, were prescribed. The blister was kept suppurating, and the pills continued some time, without any other effect than increasing the saline deposite of the urine, and occasioning a considerable diaphoresis. The symptoms of the disease were becoming more urgent, and recourse was now had to the muriate of ammonia, which it was reasonably hoped would, in its passage, act as a caustic upon the part, and afterwards invigorate the system, as well as produce its ascertained solvent effects. A scruple of the muriate of ammonia, with an equal quantity of the extract of liquorice, and as much of the extract of dandelion as was necessary to make a mass, was ordered to be taken every two hours. The patient was directed to form the mass into as many small

pills as she wished. In five weeks from the commencement of this treatment the deglutition was easier, and the sensation of bearing down in the esophagus after swallowing was sensibly diminished, and large quantities of mucus, sometimes mixed with the medicine, were thrown up, but towards the latter part of the treatment the medicine never came off with the mucus. After a continuation of the medicine eleven weeks, the patient was able to swallow bread and meat; but, as there was still some little remaining difficulty in the passage, she was directed to continue the prescription some time longer. It is remarkable, that as soon as the obstruction in the esophagus was removed, the attacks of gout reappeared as before.—*Hufeland's Journal, June*, 1825.

4. *Chronic Rheumatism cured by a hot bath of seven and a half hours continuance.* By. Dr. Teaillier.—A lady, of twenty-four years of age, had laboured under rheumatism six months. The disease affected her extremities, the articulations of which were much swollen, and rendered motion difficult. The repeated application of leeches, poultices, and of camphor and opium to the painful parts, as well as the frequent use of the warm bath, only procured temporary relief, without diminishing the disease in the slightest degree. The appetite was good, and the functions of the organs generally were healthy. An empiric, to whom she applied, advised her to remain in a hot bath, to be gradually raised nearly to the boiling point, for twelve hours, and assured her a complete cure by that alone. The patient ordered a bathing-tub, with a furnace attached to it, to her chamber, and directed her servant (a child) to keep up the fire during the whole time she was to remain in the bath. At twelve o'clock the patient went into the water, and remained till six P. M., when she lost her recollection: the servant now became alarmed, and ran to a neighbour to announce the death of her mistress, who was taken from the almost boiling water at half past seven o'clock, and Dr. T. sent for, who found the patient in the following state: face much swollen and blackish, the swollen eyelids covering but partially the everted eyeballs, the whole skin dark red and much swollen, mental functions completely at a stand, foaming at the mouth, low delirium, gritting of the teeth, convulsive motions of the whole muscular system, which increased by the slightest touch, so very sensible was the skin; breathing difficult, abdomen much enlarged, pulse hard, contracted, and one hundred per minute. Four and twenty ounces of purple blood were drawn from a large orifice, and immediately after the patient spoke, and was no longer troubled with the convulsive contractions of the muscles, but complained of great pain at the epigastrium, and excessive thirst; to allay these symptoms, a poultice and orgeat were prescribed. The night was restless, but without delirium and convulsions; the head was free of pain, but the uneasiness of the epigastrium was increased: the application of forty leeches to the epigastrium relieved this last symptom till the third day, when it appeared with greater violence than before about the umbilicus, and again yielded to the re-application of leeches, twenty in number; the cataplasms were regularly continued, and an enema was administered night and morning. The symptoms gave way gradually, particularly the extraordinary sensibility and inflammation of the skin, which appear to have acted so powerfully upon the brain and the mucous membranes of the intestinal canal. Six weeks after the restoration of the patient, the whole of the epidermis scaled off; and since the bath (January, 1824) she has never been afflicted with the rheumatism.—*Hufeland's Journal, July*, 1825.

5. *Colica Pictonum cured by means of Vinegar.*—Captain A——, a delittante in painting, had the habit of putting his painting pencil in his mouth, after using it in different colours, which contained more or less lead. In the beginning of December, 1823, he experienced slight colics, with dryness of mouth, and constipation: all these symptoms increased, notwithstanding remedies had been used, till the twenty-second of December, when he was

most violently attacked with great anxiety, thirst, hiccough, nausea, and constipation. Dr Vergari prescribed, during three days, oleaginous, saline, and drastic purgatives, enemata, baths, and diluent drinks, without making the least impression upon the disease. He now determined to try a mixture of two ounces of vinegar and two pounds of water: this was no sooner administered than it operated like a charm; the pains ceased immediately, the patient fell into a sweet sleep, and had several alvine evacuations as soon as he awoke. The vinegar drink was repeated two or three times a day till the seventh day, when the patient was perfectly free of disease.

Dr. Magleari states, that during the Russian campaign, some bottles of the extract of lead were packed in the same chest with bread and sugar: one of the bottles broke, and its contents were absorbed by the sugar; of this some partook from necessity, but instead of suffering any inconvenience from it, they felt much stronger, and better enabled to bear the fatigues and hardships of that unfortunate campaign. This observation seems to prove the utility of sugar as an antidote for poisoning from lead, and that it may be used with considerable advantage as a corrector of the preparations of lead, administered in various diseases.—*Ibid.*

6. *Efficacy of the bark of the root of the Pomegranate tree in cases of Tænia.* By Dr. Henry Wolff, of Bonn.—In the month of June, 1823, a delicate female, twenty years of age, applied to Dr. W. for relief. She complained almost every morning of pain and vomiting, frequently of colic, difficult micturition, and straining at stool; sometimes she felt considerable muscular strength, and at other times great debility. The repeated evacuation of pieces of tænia proved the nature of the disease distinctly; but the spirits of turpentine, oleum chaberti, tin filings, and other general vermifuges, were used without effect, except the expulsion of detached pieces. In order to try the effects of the pomegranate bark, application was made to an apothecary, who procured the bark of a tree about twenty years old, which had not as yet blossomed; of this bark an ounce was boiled in one and a half pound of water, reduced to twelve ounces, of which the patient took two ounces every half hour. After two doses had been taken, fasting, she felt nauseated, and vomited; and, after an interval of an hour, she drank a cup of coffee, and continued the medicine, which now remained on the stomach, till the sixth dose: an hour and a half after alvine evacuations followed, and to the surprise of all the worm came away living; after which, there were six more evacuations, each bringing away living portions of the worm. The next day the patient felt so well, that she visited Dr. W., a distance of two miles. The head of the worm was distinctly ascertained to have been evacuated.

Two similar cases, treated in the same manner, and with the same symptoms and fortunate termination, are related minutely by Dr. W. In seven other cases, the decoction appears not to have cured the disease, though it caused the discharge of detached portions of the worms; but, in two of these cases, the symptoms of tænia ceased altogether. Dr. W. thinks that this new vermifuge is particularly useful, when detached portions of the worm are spontaneously evacuated. It appears that such evacuation depends upon a species of development of the tænia, when it possesses greater sensibility, and of course is more liable to be acted upon by the medicine. The pomegranate bark appears to be more effectual when it produces vomiting and purging, than when the latter evacuation alone takes place. It is also to be remarked, that the same bark was used in the three first, and certainly cured cases; whereas, a less active bark, from smaller trees, was used in the four last cases, which appear not to have been relieved.

Hufeland's Journal, Aug. 1825.

7. *Contributions to the Medical Recorder.* By G. Barkhausen, M. D., of Bremen.—In my former communication* I stated that acute rheumatism had become one of the most dangerous diseases of our country, on account of its tendency to attack, by metastasis, the heart and brain; till, then, cases of this kind only occurred sporadically. During the last winter, however, the disease began to assume an epidemic character. Many cases of acute rheumatism occurred, which sometimes in the beginning, and often during the course of the disease, were attended with considerable pain about the region of the heart. The character of rheumatism, also, communicated itself to other diseases, as I have seen in typhus fever, hooping cough, hydrocephalus, &c., with which carditis and pericarditis were often combined.

In the early part of the summer, the affection of the brain, which, till then, happened comparatively seldom, now became more frequent, and consequently increased the danger of the disease. When the pericardium and heart alone suffered, the disease yielded without difficulty to proper treatment, and death, considering the number of cases, was not very frequent; but, as soon as the brain and its membranes were attacked, the life of the patient was in the greatest danger; commonly death ensued in the course of a few hours; nay, often so soon, that although sent for in haste, even before the physician arrived.

The following were the symptoms which indicated a metastasis of the disease to the brain. After the patient had suffered several days from rheumatic pains, which were frequently accompanied with swelling of the joints, and more or less fever, the pains left him either entirely, or were much lessened: great restlessness came on, increase of fever, a full, more frequent, and harder pulse; dry skin, with a peculiar burning heat, such as I had never met with in any other disease; the patient, as long as in his senses, complained of nothing so much as this insufferable heat, particularly in the palms of the hand, soles of the feet, and along the course of the large nerves and blood-vessels of the extremities; throbbing and burning in the head, tingling in the ears (tinnitus aurium), head-ache, constant desire to urinate, the urine itself became paler, and finally transparent, as in hysteria, yet I observed it, in some few cases, deposite a white flaky sediment; finally, delirium, and after that stupor came on, and death soon followed. I ought to remark, also, that in many, but not in all cases, the disease was accompanied by a miliary eruption, which was always symptomatic. The body, after death, did not soon become cold, and speedily passed into a state of putrefaction. Examination always showed inflammation of the brain and dura mater.

During the spring of this year the disease became more favourable, as in the winter before; it became more violent in June, and still more so in July, when a few hot, were suddenly succeeded by a few cold days; it spread, however, and became more violent and dangerous in the month of August, and seemed to attack more particularly young females. Towards the end of September, the stomach was more frequently affected, when it became much more tractable. Since the beginning of October, the disease has considerably diminished both in frequency and malignity: there are however, at present, (middle of November,) some violent cases, which, although mostly of a gastric inflammatory nature, generally terminate in nervous or typhus fever.

Whatever character this disease assumes, the danger always threatens from one and the same source, for it is always the affection of the brain and heart which endanger life. The metastasis generally takes place within the first nine days of the disease, seldom later.

In the treatment of this disease, the change of character will require a peculiar modification. What I mentioned in my former communication respecting the treatment when the heart and pericardium are affected, my

* See Medical Recorder, Vol. VIII. p. 180.

experience during the past winter has confirmed; this was not the case, however, during the summer, when the malignity of the disease bid defiance to all the usual remedies. From the peculiar condition of the skin to which I before alluded, and which, in most cases, preceded the approach of death. I was induced to believe, that from the external application of cold water, relief might be expected, and experience has shown that I was not mistaken, as in several, by any other treatment, hopeless cases, I have been able to save patients by this remedy.

As prejudice, and circumstances in private practice, seldom allow the use of cold shower baths, I generally contented myself by washing the whole body with sponges steeped in pure water, or in a mixture of vinegar and water; the main point to be attended to is, that the washing be continued until the heat of the skin be reduced to its natural temperature; it should be repeated afterwards as often as the return of heat requires it. After the first general washing, it is often sufficient to apply the cold water to those parts of the body to which the heat soonest returns, particularly the palms of the hands, soles of the feet, and the face; when the brain is attacked, I immediately make use of cold applications to the head.

It will be understood, that with this treatment the other adequate remedies ought no more to be neglected than in cases where there is no such indication; these are principally the antiphlogistic measures, derivatives, as local and sometimes general bleeding, and, when the stomach is principally affected, emetics and purgatives.

8. *Radix Artemisia Vulgaris* has been recommended by Dr. Burdach, in Hufeland and Osan's Journal of Practical Medicine, for Dec. 1824, and Oct. 1825, as a remedy in epilepsy. The patient is directed to take immediately, before or after the paroxysm, from fifty to seventy grains of the pulverized root, which should have been gathered in the spring or fall, cleaned from wooden parts, and dried in the shade; the same dose is to be repeated on the third and fifth day, after that every other day, and only in desperate cases once or oftener daily, when the wished for result does not ensue.

The remedy is said to be particularly useful in the commencement of the disease. In epilepsy which attacks young men between the seventeenth and twenty-fifth year, and comes on every five, ten, or fifteen days, most commonly in the night, this remedy is said to have no good effect, nay, even to increase the evil; but when it attacks young females about the period when menstruation is about to commence, Dr. Burdach found it highly valuable. The testimony of Hufeland, Dr. Edward Gräefe, and several other physicians, (in Gräefe and Walter's Journal of Surgery, vol. vi. p. 358,) with regard to this remedy, is quite favourable. I have made a number of trials myself with it in epilepsy, but am not, as yet, prepared to communicate the results. Further experiments with this, as well as of all other specifics praised for the cure of epilepsy, will indubitably prove, that each remedy is only applicable in certain cases; and thus it appears to me, that the radix artemisia is particularly applicable in cases where epilepsy has its foundation in the absence of energy in the nervous system, without existing organic defects, and deserves therefore, according to this view, to be classed with the radix valerianæ sylvestris, and similar articles.

That the artemisia acts powerfully on the whole nervous system, a case of Chorea St. Viti, in which I used it with particular benefit, has convinced me.

A youth aged seventeen years, who in his physical, as well as intellectual capacity, was considerably deficient, suffered from his earliest youth, from a morbid condition of the nervous system, the existence of which we denominate chorea. About five years ago I took him into the hospital, of which I am physician, under my care, and cured him by large doses of flor. zinci. He remained now healthy for several years, but by degrees his old complaint showed itself again, for which I took him again into the hospital.

During a whole year I treated him with all the usual remedies, which at an earlier period had proved useful to him, but without any success. At last I had recourse to the radix artemisia vulgaris, and exhibited it to the patient at first every other day, but afterwards twice to three times every day, from scruple ss to scruple j, and after several weeks he was dismissed perfectly cured.

I have no knowledge that any writer has made mention of a pathologic appearance, which I had twice an opportunity to observe, i. e. the absorption of lead in the organic texture of persons who have been engaged in lead preparations. The first observation of this kind I made, several years ago, on the corpse of a man who had been working for several years in one of our white lead manufactories, who had repeatedly suffered from colica pictonum, and who died at last of a common *tabes* and paralysis.

I found here the internal coat of the intestines covered with a black grayish membrane of considerable specific gravity, the structure of the great and small intestines was considerably enlarged, the *tunica nervea* and muscularis spotted also by a black-grayish pigment, these also had a considerably increased specific gravity. Chemical analysis proved that the colouring matter of these false membranes was no other than sulphate of lead.

In the second case I found that in the corpse of a man who had worked considerably less in white lead than the first, the intestinal canal was enlarged, and the tunica nervea and muscularis stained of a blackish gray; and in such a manner, that the colouring began in the duodenum and was there the darkest, and decreased by degrees towards the end of the canal. Here was not near so much lead absorbed as in the former case, but sufficient to be demonstrated with the aid of galvanism.

9. *Internal use of Native Oil of Laurel, or Aceyte de Sassafras.*—My friend Charles S. Parker, junior, having sent to me, from the West Indies, a bottle of this essential oil, which is highly extolled as a medicine by the Indians on the Oronooko, I have made several trials of it as an internal remedy. I took it myself, for six weeks, to the extent of twenty drops, two or three times a day, in hopes of obtaining relief from a very painful *sciatica;* but without the least advantage. I found it by no means unpleasant to the stomach, in doses from ten to fifteen drops on a piece of sugar; and it is a grateful and powerful diuretic. In several cases of general chronic rheumatism, however, I have prescribed it with marked advantage. In one instance it removed, in a short time, a chronic rheumatism of the limbs, which had for nearly two years afflicted the patient. In another case, after severe acute rheumatism, it had a marked influence in mitigating the distressing flying pains which so often follow that painful disease. I have used it also externally in rheumatism; but its high price renders this an objectionable mode of employing it; and I did not find that it possessed any advantage when thus applied, over our common rubefacients and stimulating liniments. It seems to be a species of turpentine, more resembling balsam of copaiba in odour and taste than any other substance, and I have used it instead of the latter in a few cases. I send you a small phial of it. Like some other new remedies, it has been extravagantly extolled as a remedy for gout, rheumatism, and many other ills "which flesh is heir to"—but I have no doubt of its proving a valuable addition to our Materia Medica.

I send you also a specimen of *pure* balsam of copaiba, as obtained by the Indians in its native forests, and warranted free of any adulteration, which is said not to be frequently the case with the best which is seen in the shops.—*Edinb. Med. and Phys. Journ. Oct.* 1825.

10. *On the Ointment of Tartarised Antimony.*—A remarkable effect of the free application of this remedy to the lower extremities, (says Dr. Elliotson,) is the production of pustules upon the genitals. I have ordered this application of it in very many cases of rheumatic pains, and, when Dr. Jenner's work upon its virtues appeared, subjected the legs of a host of patients to its irritation, as in Deacon's case, with the hope of removing the disease

of a distant part. In the greater number of examples, the appearance of pustules on the legs, even when the ointment was rubbed entirely below the knees, was accompanied by a crop of pustules chiefly upon the scrotum, but also upon the glans and other parts of the penis, and sometimes in the perinæum, groins, and on the verge of the anus. Similar consequences resulted in females. The friction on the abdomen with the ointment has occasionally had the same effect. I have never noticed the same circumstance when the ointment was rubbed on other parts, unless the patient was careless and dirty, and touched the genitals with it.

It is with the deepest regret that I state my failure with this ointment, employed with the view of curing or lessening the various diseases of distant parts, for which the ever-to-be-revered Jenner hoped that he had found a remedy. But I fully value the ordinary use of the tartarised antimony in the immediate neighbourhood of diseased parts, although convinced that, even in chronic cases, blisters are often of not at all inferior, and often of superior, efficacy.—*Medico-Chir. Trans.*

11. *Comparison between the State of Ophthalmic Surgery in France and Germany.* By Dr. F. A. Ammon, Dresden. Concluded from page 208.

Iritis, its causes, progress, and cure, have been thoroughly investigated by the Germans, and they have given certain diagnostic marks by which the complaint may with certainty be ascertained. If, however, this disease is not unknown to the French physicians, it is very frequently mistaken by them; and if at first the strict antiphlogistic treatment were not adopted against every disease of the eye, the inflammation of this part of the organ of sight, would only too often run through all its stages undiscovered, till the mistake was made known in its dreadful consequences. As syphilitic iritis was first made known to the French by the observations of the Germans, so have they cast on us the unfounded reproach that we attribute every kind of iritis to a syphilitic cause—wonderful delusion! The term *hippus* enjoys among the French no fixed meaning, as with us, where it is either designated to represent spasms of the iris, or a continued fluctuation of the iris from the posterior to the anterior chamber, and *vice versa*. The situation and form of the pupil and its colour, symptoms from which so much assistance may be derived in forming a true diagnosis, and the importance of which V. Walther has shown in a classical paper on diseases of the ciliary system, do not meet from French oculists the attention they deserve. Dupuytren only is an exception, and his acute perception and great tact often enable him to foretell from these circumstances what course the disease will take. The diseases of the anterior chamber, in which most inflammatory affections are to be found, have attracted the attention of oculists both in Germany* and England;† we allude principally to the inflammation of the tunica humoris aquei and its consequences, but in France have been quite neglected. Of all the different modes of curing opacities of the cornea, Dupuytren's in Paris enjoys the most extraordinary fame. It consists shortly of the following means; if there is an inflammation of the cornea, or only of the neighbouring parts, and this is but slight, Dupuytren orders bloodletting, or directs the application of some leeches. Then in about four days some gentle purgatives will be given. As soon as the inflammatory symptoms are removed, he orders the following powder to be blown into the eye morning and evening, ℞ *Tuthie preparee, Sucre candi, calomelas anglais, a parties egales.* This is continued for some weeks, and seldom fails within that time to effect its object. If the opacities are already very old and large, and approaching to a leucomatous nature, then a seton at the nape of

* Langenbeck's neue Bibliothek IV. B. 1 str. stuck. S. 66.

† Wardrop. An Essay on the Morbid Anatomy of the Human Eye. Edinburgh, 1808.

the neck is necessary, and the powder is blown into the eye for some minutes at a time.

In adults, commencing disorganization of the cornea, which threatens to go over into a staphylomatous metamorphosis, is successfully treated by Delarue with caustic lotions. The deceased oculist Pellier of Montpellier, states, that he cured, in 1779, a leucoma, by means of a seton drawn through the opake part of the cornea. The seton consisted of a double silk ligature, and was daily anointed with the unguentum basilicum. Delarue also assures the profession, that he has tried the same means with success. If, however, Juvenal's words are not applicable—

"——— non hic,
Cantatur, res vera agitur,"

still the thing is extremely remarkable, and deserves a more minute consideration. Dupuytren also employs with success, in very prominent disorganization of the cornea, conjunctiva, &c. gentle pressure, gradually increased, which he effects by means of small compresses, made of charpie, and covered with linen; these he makes large or small according to circumstances, and then binds them on to the projecting part. The antiphlogistic plan of treatment is the one generally employed in all diseases of the eye, and Sangrado's assertion, "*c'est un erreur de penser que le sang soit necessaire à la vie, on ne peut trop saigner un malade,*" is unfortunately echoed by too many. The slightest inflammation of the eye requires, in France, bloodletting; and without leeches, the most trivial catarrhal ophthalmia will not be treated. In short, the French go into two extremes in the treatment of ophthalmia; generally they employ an antiphlogistic, and locally an irritating plan of treatment. The topical applications in general use are lotions. Cataplasms also are more frequently ordered in the French than in the German hospitals. Whilst the blowing of different kinds of powders on the surface of the eye is entirely done away with in Germany, and the application of these substances by means of a pencil is substituted for it, one still sees this plan daily employed in the Hotel Dieu. Dupuytren is a great friend of this mode of employing local applications, of which calomel is his favourite. Fischer, a German surgeon, several years ago recommended the use of this form of quicksilver locally in acute ophthalmia, particularly in corneitis, when it has passed over into the chronic stage, and when the whole anterior chamber, as well as the iris, are also sympathetically affected. I employed it once myself with advantage in a staphyloma, which was the result of an ophthalmia neonatorum; and by the long continued use of the calomel, the projection of the cornea disappeared, and the little child could afterwards close the eyelids with ease. In one case the cornea resumed its transparency, and the power of vision was restored.

Dupuytren, after a continued use of the belladonna internally, for the space of ten years, is perfectly convinced of its efficacy in long standing cases of scrofulous ophthalmia, and in the inflammatory symptoms occurring after depression of the cataract, which he generally takes to be those of *retinitis*. He gives either the *pulvis belladonnæ* in the dose of three to twelve grains upwards, or the extract of bell. from one to three grains, in six pills, of which two are to be taken every hour. Blood-letting, leeches, emetics, and strong derivantia, as epiplastica, and blisters, frictions from tartar emetic ointment, and setons, are the other medicines which are at present used in the treatment of obstinate ophthalmia, amaurosis, and incipient cataracts, by the French surgeons. To the nature and origin of encysted tumours (*kyste sereux*) in the lamellæ of the cornea, which have neither been described nor observed in Germany, Dupuytren has lately directed his attention. This surgeon observed in a child a serous encysted tumour, which had developed itself between the lamellæ of the cornea, and which he at the first view conceived to be an opacity of this coat. This remarkable pathological

appearance was the consequence of a blow from a stone, which had struck the eye of the child six weeks before. Dupuytren introduced a cataract-needle into the small cyst, and moved the instrument up and down in it, in order to irritate its inner surface. The fluid in the tumour was thus evacuated; but in fourteen days afterwards it formed again. The operation was again repeated, and adhesion of the sides of the sac took place, but opacity of the cornea remained behind. The mode employed for the removal of staphyloma in France, is either Scarpa's, or a modification of Scarpa's operation. Pterygia are also removed there by scissors, bent in a line parallel with their handles. An artificial eye is frequently worn after the removal of staphyloma, although some recommend it only to be employed after the extirpation of the bulb. We cannot let the present opportunity go by without speaking of the employment of *senega* in different diseases of the eye, the excellent effects of which Dr. Schmalz in Pirna, in the course of ten years, had an opportunity of observing. *Senega* appears to be the vegetable calomel. Wendt,* in Erlangen, has already spoken of its employment and use in the treatment of hypopion. Within the space of twenty-six years, this physician had an opportunity of observing the good effect of this plant in suppuration of the eye, no less than thirty times.

Cataract.—Since the time that V. Walther† in Bonn drew the attention of German physicians and surgeons to the fact, that several diseases of the crystalline lens and cataract take their rise from inflammation of the capsule, or of the body of the lens itself; this opinion has been generally adopted in Germany. It is a matter of no little surprise, that in France, where all diseases are looked upon as inflammatory, this theory is generally doubted. In France, the origin of cataract is attributed by some to the metastatic effect of some existing irritation, sudden suppression of accustomed secretions and excretions, or a disproportion between what is exuded and absorbed within the capsule; others believe that the origin of cataract may be explained by thinking it a necrosis,‡ or gangrene of the capsule, and, taking the soft parts which surround the lens for the residuum of a chemical decomposition and physical dissolution of the crystalline, and the different changes of colour which one observes, for an accidental result of new connexions, that form themselves in the separated and decayed parts of this body. The modern French ophthalmic writers conceive it very improbable, nay, almost impossible, that inflammation of the capsule or the lens can take place, and they endeavour to support their opinion in part by the false assertion, that no inflammation can occur where there are no blood-vessels, and in part by saying that a cataract is peculiar to old age. But as they are aware of the possibility of the formation of pus in or on the capsule, so they are obliged to confess, that inflammation of the lens is possible, but that it is very difficult to detect, and they repeat the hackneyed saying, that the patients must bear the inflammation of the lens or the capsule till the opacity has proved itself, because it is only then that any assistance can be rendered. Still there are to be found persons opposed to this opinion. Dr. Valentin affirms, that he has prevented the formation and ripening of incipient cataracts, by repeated emetics. Goudret, a Parisian oculist,§ assumes to himself the credit of having cut short the formation of a cataract by the application of cauteries over the tuberosity of the occiput; and Larrey does not hesitate to say, with an air of dogmatism—"Le defaut d'action dans les

* Annalen des klinischen Institute auf der Academie zu Erlangen, herausgegeben von Dr. Frederick Wendt, Ister Heft, Erlangen, 1808.

† Abhandlungen aus dem Gebiete der praktischen Medizin, besonders der Chirurgie und Augenheilkunde Ister Th. Landshut, 1810, in 8.

‡ Guillié, Nouvelles Recherches sur la Cataracte.

§ Vide Delarue's Work, p. 144.

membranes du globe de l'œil, la cataracte commencante indique veritablement l'application du moxa."

The finer distinctions between the different forms and kinds of cataract, as they are described in German works, and taught in the clinics in Germany, are certainly also known in France, but, on the whole, are quite disregarded. We even saw some well informed French surgeons doubting whether it was possible, by the mere sight, to determine whether the cataract was hard or soft. In the few past years, the cataracta nigra and the congenital cataract have principally occupied the attention of the French oculists. If the lens or its capsule in a congenital cataract is quite opaque, and organically formed, the French oculists generally defer an operation till the child has grown up. If, on the contrary, the opacity in the beginning were slight, but afterwards made greater progress, till the pupil closed, and if in this state the pupil did not lose its mobility, Delarue believes that the lens may recover its transparency. In this age the vitality of the absorbent system is strongest, and it is by this alone that the effect can be produced. An opinion for a long time prevalent, that in congenital cataract the capsule only was opake, whilst the lens is in a perfect state of transparency, Delarue has lately endeavoured to prove to demonstration. He asserts, that by means of a needle brought through the cornea, he has opened the opake capsule in the centre, and thus allowed the free passage of the light to the retina.

Delarue has lately denied the existence of the cataract which has been described by writers on diseases of the eye, namely, that which consists in an opake state of the liquor Morgagni, since Delarue denies the existence of this humour altogether, having never seen it by the most minute dissections. The kind of cataract known and described by the name of *cataracta nigra*, has in modern times found a warm supporter in Guillie. Guillie believes that the black cataract shows itself in countries far north and south, and that those of a sanguineous temperament were more frequently affected with it than persons of a relaxed and lymphatic constitution. It is not difficult, according to Guillie, to distinguish the cataracta nigra from glaucoma. The pupil has, says Guillie, a colour (?) *sui generis*, which one can never mistake after having once seen it; one never observes the green hue which characterizes the affection of the vitreous humour. The diagnosis of the black cataract from amaurosis, is still more difficult. Guillie believes that the spontaneous change of position, or the depression of the black cataract, is often mistaken for a cure of an amaurosis. The relaxed and hazy iris generally retains its power of motion when the black cataract is present, and the loss of vision is more gradual than in amaurosis. Guillie is also of opinion, that the operation of extraction is indicated in this kind of cataract.

In no country has so much been said and written on the different operations for cataract as in Germany, the followers of Beer being strongly in favour of extraction by the cornea, whilst Lichter's disciples prefer the use of the needle. We need here only mention the names of Willburg, Schiferli, and Gunz, to bring to recollection the different modes which have been tried in the removal of the lens from the axis of vision. In 1806, also, Buckhorn came forward with the first idea of the operation of Keratonyxis, when a new field of discussion opened itself, and a terrible contest ensued. It would be, therefore, almost difficult to say which mode was most employed in Germany. In France, also, different surgeons adopt different modes of operating: For instance, in the Hotel-Dieu, Dupuytren operates only with the needle, whilst Roux, in the *Charite*, always extracts. The operation performed with the needle is generally a modification of Scarpa's. Specula for fixing the upper eyelids, I never saw employed. The assistant always held them with the fore-finger of one or both hands. The position in which the surgeons performed the operation varied, some standing, and others sitting. The patients were generally placed in the sitting posture, excepting in the Hotel-Dieu, where Dupuytren always operates on the patients in

bed. If about to operate on the right eye, he places himself on the right side of the patient, and in front, and then with the right hand fixes the under eyelid, and *vice versa* if on the left. The needle, which he holds between his fingers like a pin, resembles Schmidt's, has a double cutting edge, and a moderate curve. He supports his hand by means of the little or ring-finger on the cheek or temple, and then introduces the needle about a line and a half removed from the cornea, in the transverse diameter of the eye, through the sclerotica, and describes with the handle such a motion, that the point of the needle appears in the opening of the pupil. He then lays the convexity of the needle on the lens, fastens with the point the anterior surface of the cataract, and presses it downwards, outwards, and backwards, under the corpus vitreum. During this manœuvre of the instrument, the handle must also be moved forwards, upwards, and inwards. If the pupil be now clear, he lets the point of the needle rest in the same direction downwards, so that the corpus vitreum, in which the cataract is depressed, and which is to a certain degree separated, might flow together, and prevent the ascent of the cataract. Dupuytren conceives it a point of great importance to depress the capsule at the same time with the lens; or, in the case where it remains behind, he carries the needle, after the depression or reclination has been performed, again upwards, and endeavours to bring the remaining portion of the capsule into the anterior chamber, that it may there be absorbed. If a secondary cataract occurs, Dupuytren operates again, and endeavours to depress the opake lens, or bring it into the anterior chamber. If the cataract be soft, or if it be a milky cataract, Dupuytren always performs the decision (le *broiement*) through the sclerotica. Dupuytren attributes his success in the operation for cataract in no small degree to the horizontal position in which the patients are always placed during the operation. He also invariably avoids operating when any rheumatic catarrhal diseases are prevailing. One of the most common, and at the same time dangerous consequences of the depression or decision of the cataract, according to Dupuytren, is the inflammation of the retina (*Retinitis*), which some physicians, who pay attention to a few symptoms only of the disease, without looking at the whole, term *iritis*. This disease we had an opportunity ourselves of frequently witnessing at the Hotel Dieu, particularly in scrofulous children. The symptoms were, great intolerance of light, cloudiness of the humours, contraction of the pupil, redness of the conjunctiva, and spasmodic contraction of the orbicularis. The disease sometimes terminated in loss of vision, which is caused, according to Dupuytren, by the formation of a new fibrous pellicle, (*une pellicule fibreuse accidentelle*), which adheres to the iris. An operation, however, may again be performed after a few months,by which there is a chance of restoring vision. If the frequent occurrence of this disease is not to be attributed to the mode in which the operation is performed, which is not sufficient to account for it, when the patients are examined, on the morning after the operation, by candle light; and if, with this very injudicious treatment of one of the most delicate organs of the organismus, the success* of the eye-operations is still considerable, it is owing to the strict antiphlogistic means which this surgeon employs both before and after the operation.

* According to Ratur, the success of the operation for cataract in the Hotel-Dieu is as 7 to 8; and from Begin and Sanson (Sabatier, Nouvelle Medécine Operat. 1824, t. iv. p. 175), we learn, that between the years of 1814 and 1823, there were admitted into the Hotel-Dieu 306 cataractous patients. Of these there were 180 men, and 126 females. In 265 the cataract was depressed, and in 7 extracted; in 9 keratonyxis was performed, and in 25 the operation was contraindicated. Of these, 216 were cured, 25 under cure, and in 40 the operation was unsuccessful. Of the cataracts there were 279 lenticular, 22 membranous, and 5 milky.

With respect to a practical course of instruction, where one is taught how to perform the different operations on the eye, such as is to be found in every German university, we find nothing of the kind in Paris. In Lisfranc's* operative school the operations on the eye are most superficially taught. All the operations of this kind are performed on collapsed eyes, which have laid in the dead-house several days. *Phantomes*, for the teaching of the eye operations on the eyes of animals, are quite unknown. There Lisfranc confines himself almost entirely to the teaching of Sclerotonyxis, and scarcely touches upon the difference between depression and reclination; and if, in recommending, with Savonarola,† to keep the cataract in the bottom of the eye till one can say the "*Miserere*," or "*Pater noster*," he leaves his scholars in uncertainty whether the observation is to be taken in joke or earnest.

If we take a glance at Germany, we shall find, as far as regards the *sclerotonyxis*, a warm supporter in Langenbeck. This celebrated surgeon, whose merits in ophthalmic surgery are generally known, has been so fortunate in the performance of this operation, that from forty on which he operated, thirty-nine recovered their vision. Langenbeck, however, unlike some of the principal surgeons in Paris, determines on the nature of the cataract before he operates, and regulates the nature of the operation accordingly. Roux and Demours are great friends for extraction. Demours says,‡ "L'orsque rien n'indique specialement la depression, il faut extraire." Both of these surgeons have in a few points modified the operation of extraction, but, strictly speaking, the operation of Wenzel is the one generally employed, although those few who are not entirely ignorant of what has been done out of their country, have adopted Beer's improved operation. What Wenzel, nearly eight years ago, said respecting the French asserting to themselves the claim of having invented the keratonyxis, has actually taken place. "It almost strikes me," says Wenzel,§ "that the French will claim the invention of the keratonyxis, and that they will finish by saying that they had perceived its inefficiency ten years at least before the idea of the operation ever struck the Germans." Dupuytren, some years ago, was going to operate on a girl for cataract in the usual way, viz. by the sclerotic; but the patient was so restless that it occurred to him to introduce the needle through the cornea, and in this way depress the cataract. Thus the late translators of Scarpa's work relate to us the story, and usurp to French surgery the invention of the keratonyxis. Guillie and Faure are the only two that we know who have advocated the operation of keratonyxis. The first of these has often performed this operation, which I had an opportunity of witnessing in Paris. I never saw Dupuytren perform the keratonyxis, although this surgeon has not quite abandoned, in speaking of it he says, "considerée sous le rapport des avantages qu'elle peut avoir dans quelque cas particuliers, elle (keratonyxis) merita d'etre conservée." The way in which he performs the operation is as follows: After the eyelids of the patient, who is always in bed, as in the other operations for cataract, are properly fixed, Dupuytren takes the needle in the right hand, so that the concavity of the curve rests upwards, and pushes the point of it through the lower part of the cornea into the anterior chamber, and then carries it to

* Vid. Parallele der französischen und deutchen Chirurgie, Leipzig, 1823, p. 37.

† Practica Major Joh. Michael Savonarola, Med. in qua de morbis omnibus ea diligentia et arte disputatur, ut iis qui medicam artem exercent, nihil possit esse accomodatius. Venet. 1560. fol. Tract. vi. c. 3. p. 88. "Et postquam deposueris cataractum teneas eam depressam cum acu, usque quo diceretur unum Miserere, aut tres Pater noster."

‡ Precis Theorique et Practique sur les Maladies des yeux à Paris, 1821, p. 396.

§ Lib. sup. cit.

the lens. If he wishes to depress the lens, he makes a half motion of the needle on its axis, in order to get the convexity of the needle upwards, and carry its point between the upper part of the iris and lens; then he fastens the cataract with the concavity of the instrument, and brings it on the outer part of the pupil. If, on the other hand, he wishes to cut up the lens, he then does it sometimes with the cutting part, at others with the point. After the decision or depression has been effected, the needle is withdrawn in the same direction in which it was introduced.

Artificial Pupil.—The separation of the parenchyma of the iris (*Iridotomia*) is the one generally performed in France for artificial pupil. Demours, the chief of the French oculists, says of it, "Je n'ai rien trouvé dans les ecrits posterieurs au mien publiés soit en Allemagne soit en France qui m'ait donné tentation de m'ecarter du plan que j'ai adoptè." It is performed by Demours by means of a needle carried through the cornea. Without stopping to inquire whether Demours be the inventor of this operation, we will only allude to the restricted application of this operation. Demours rejects altogether the *iridotomia*, and regards, in a most unfair light, the separation of the iris from the ciliary bodies; he adheres to the cutting into the iris (*iridotomia*), by which he is repeatedly foiled, or at least succeeds only in making a very slight opening in the iris, in cases much more adapted for one of the other operations. It is a good thing that Cheselden, and the services which he rendered the profession, will not be forgotten, or we should most likely see some unlearned Frenchman endeavouring to give Demours the honour of having invented the operation. Already Demours goes so far as to say,* "On rend aujourd'hui la vue à des aveugles qui etoient avant l'epoque ou j'elevai la voix en leur faveur dans un etat si desesperè, qu'on ni songeoit pas même a faire la moindre tentative pour les en tirer." Roux, I have been told (for I did not see him operate), adopts Adams's improved operation. Delarue, although, like Demours, is fond of Cheselden's operation, yet is almost the only one who gives to the three operations their respective merits. The small hook for the separation of the iris from the ciliary body, is certainly to be found in some of the French instrument-makers' shops; but I never heard it spoken of by any of the oculists in Paris; and as for the coreoncion, it is quite unknown.

Fistula lachrymalis.—Notwithstanding the numerous, and not unfrequently subtile treatises on the diseases of the lachrymal sac and nasal duct, for which Germany is indebted to the talents and researches of a Schmidt, Himly, &c still the treatment of the disease, vulgarly called fistula lachrymalis, remains one of the most unpleasant and tedious parts of surgical practice. In France there exists very little precision as to the nature of the complaint; still Dupuytren is on the whole successful in the treatment of it. Roux, Dubois, and the late Beclard, with several others, employ needles, or pieces of lead, or pieces of catgut, for the dilatation of the narrowed canal, or they modify Desault's mode of operating, according to Scarpa's directions. Dupuytren's mode of operating, the bringing of a gold or silver canula into the nasal canal by an incision in the lachrymal canal, which has been known to German surgeons for a long time past, I saw frequently performed by Dupuytren himself. The merit of this mode of operating is due to Joubert; and Dupuytren can only be called the reviver of it. After the puncture of the lachrymal sac has been effected, in the performance of which he pays no attention to the tendon of the orbicularis, but only to the nasal process of the superior maxillary bone, he directs the patient, in order to see whether the nasal canal be free, to hold the nose, and make a strong inspiration and expiration; if in the act of expiration, air comes out of the wound, then the object of the operation is generally accomplished. By the strong inspiration or expiration which one is compelled to make the

* Vid. Cours Complet des Maladies des yeux, a Paris, 1820, p. 209.

patient perform, it sometimes happens that a quantity of air escapes into the cellular membrane of the inferior eyelid, and the neighbouring parts, so that emphysema occurs, producing a distressing tumour of considerable size. I saw this accident occur in two cases which Dupuytren operated on. The swelling was dispersed by the application of cold in the space of twenty-four hours, but the cicatrization of the wound was retarded. If there should be a fistula, the edges of which are callous, Dupuytren always touches them with the nitrate of silver on the introduction of the canula. We will give the opinion of two of Dupuytren's scholars (in the last edition of Sabatier's Surgery, p. 257, Vol. II.) on the result of this operation. Dupuytren's plan is one of the simplest and most practicable that can be devised. If the canula is once brought into the nasal canal, and if it remains there firm, then every after-cure is quite unnecessary; the cicatrization of the external wound takes place in four and twenty hours, when the puncture of the sac has been made with the bistoury; if a fistulous opening previously existed, the cicatrization takes place somewhat later. A great number of the patients operated on scarcely know whether they have a foreign body in the lachrymal passage or not, so slight is the inconvenience produced by it. They all exhibit signs of astonishment when the operation is completed, that so little time has been required to perform it. Several patients of all ages and both sexes have been operated on by Dupuytren in this way with the best success. The results of this mode of operating are as follow:—From twenty patients at least sixteen were radically cured, without the slightest displacement of the canula. In the remaining four cases, from various causes, it was necessary to remove the canula. If, after the puncture of the lachrymal sac has been made, the *os unguis* is found laid bare and in a carious state, one ought to wait for the exfoliation of the bone, and keep the wound open by means of charpie brought into it, and after this lay in the canula. If the canal is stopped up, the surgeon must endeavour to remove the obstacle to the side; or if the canal be quite obliterated, or no traces of it existing, as Dupuytren has several times found to be the case, then he makes the perforation of the lachrymal bone, recommended by Wolhouse, Petit, Hunter, Scarpa, and others, and then lays in a peculiarly formed canula, the ends of which are somewhat larger than its centre. The operation of Dupuytren appears to me so well adapted for the cure of the disease, that I am really surprised that it has not met with a more general trial. The canula can effect no cure where there is a polypous state of the mucous membrane of the canal, or where the inferior concha is the cause of the blennorrhœa of the lachrymal sac; in this last case the drawing through the canal of a silk thread, as recommended by Dr. Schmalz of Pirna, will be found peculiarly useful. And, lastly, the application of Dupuytren's canula is always contraindicated, when, on account of a great narrowing of the canal, great force is required.

Extirpatio Oculi. The extirpation of the eye, which is indicated by the presence of carcinoma or fungus hæmatodes of the organ, is generally performed merely with a simple bistoury, even the division of the optic nerve is also done with the knife. The complaint of the ill success of this operation is in every surgeon's mouth; the disease for which it is performed generally comes again (fungus or cancer) and destroys the patient.

We have thus given a short sketch of the state of ophthalmic surgery in France; and we think that the causes which have hitherto retarded the improvement of this part of medicine in that country will soon be removed, and that in scientific pursuits the national prejudices with which the French have been so long beset, may shortly give way to a nobler and a better feeling.—*Gräfe's and Walther's Journal fur Chirurgie und Augenheilkunde. February*, 1825.

12. *Tic Douloureux.*—Our experience is gradually enlarging on this subject.

Case 1st.—A clergyman, aged about forty, of a thin habit of body, and free from organic disease, was seized, on exposure to the external air, when heated and fatigued by the exertion of preaching in a close and crowded chapel, with a very violent pain affecting the second branch of the fifth, and portio dura of the seventh pair of nerves.

At first the complaint was treated as a rheumatic affection: but the symptoms becoming more distinctly marked, it was pronounced to be *tic douloureux;* and various remedies, both internal and external, were in vain employed for its relief.

At length, the *arsenical solution* was had recourse to, and was continued for six or seven weeks with much benefit; when it disagreed with the bowels, and was in consequence given up. In its place, however, full doses of the *sulphate of zinc* were substituted, which in a few weeks more completely conquered the disorder.

Case 2d.—A widow lady, aged about forty-five, became affected, towards the autumn of 1815, with violent pain in the left side of the face; a pain which came on in short and frequent paroxysms; which was increased on pressure being applied to the infra-orbital nerve; and which, on such occasions, spread over the forehead to the back part of the head.

In the relief of this pain, the bark and opium were first exhibited; then sulphate of zinc and copper; then arsenic, conium, hyoscyamus, belladonna, and aconitum; but all in vain.

It was then proposed to divide the nerve, and a day was fixed for the operation; when on the morning before it was to have taken place, the patient passed by stool a piece of a *tape-worm*, about seven inches long. This led to a suspicion that the existence of the pain in the face was connected with the presence of one or more of these animals in the intestinal canal. The oleum terebinthinæ was in consequence exhibited, in doses of two drachms three times a day, with occasional purgatives; under which treatment two more pieces, and three small perfect *teniæ*, were in the course of a few days expelled;* and the pains, at the same time, completely and permanently removed.

Case 3d.—A married woman, aged sixty-three, had for several years been afflicted with severe and acute attacks of rheumatism on both sides of the face, and especially on the left. When first seen by the reporter in October 1816, she complained of pain in this side of the face more darting than usual; and the part, on examination, was found so tender, as to excite, on being touched, the most piercing cries and violent contortions.

In a few days an attack of erysipelatous inflammation came on, which lasted about a week; and, at the same time, the other side of the face began to be affected. Attacks of this kind continued for some time, coming on monthly, and being always accompanied by a disagreeable discharge from the vagina. This circumstance led, (after tonics, aperients, and opium, had been tried in vain,) to an examination per vaginam, when the *os uteri* was found enlarged and indurated, and so irritable that the whole frame became convulsed during the examination of this part.

The *carbonate of iron*, in doses of five grains every four hours, was now prescribed, with an opiate at bed-time, and occasional aperients. Under this plan, which was continued, it appears, for about two months, considerable benefit was received by the patient; the paroxysms of pain having in this

* One of these pieces is stated to have been about nine, and the other four and a half inches long—and the lengths of the small teniæ respectively are stated to have been, eighteen and a half inches, eleven inches, and six and a quarter inches.

time become much less severe and frequent, the discharge from the vagina having ceased, and the appetite, strength, and sleep, having much improved.

Note.—The final termination of this case is not given; but nothing, perhaps, beyond a partial and temporary relief was to be expected, in a woman of sixty-three, long affected, as she appears to have been, with organic disease of the uterus.—*Lond. Med. Rep. Dec.* 1825.

13. *On the Reproduction of the Crystalline Lens.*—M. Coquehean has laid before the Royal Academy of Medicine of Paris, a paper, designed to prove, from experiments made on young animals, such as puppies and young rabbits, that the crystalline lens may be reproduced, provided it be extracted with care, and with the least possible injury to its capsule. If such be the fact, it is quite accordant with the opinion maintained by Professor Blainville respecting the nature of the lens, and the office of its capsule.

Johnson's Journal, Jan. 1826.

14. *Of the Chloruret of Lime as a disinfecting agent.*—M Deslandes has published an observation upon the use of chloruret of lime in destroying the odour arising from putrid animal matter. In a case in which the placenta was retained and came away in shreds, producing such effluvia that the chamber could hardly be borne, this preparation completely succeeded. It was injected in the proportion of an ounce to a pint of infusion of marshmallows. The putrid odour disappeared after the second injection; and this being frequently repeated, it did not again return.

Lond. Med. Rep. Jan. 1826.

15. *Muriate of Gold in Syphilis.*—Dr. Gustavus Benaben has published some cases of the above disease cured by the muriate of gold. He precedes the relation of these cases by reminding us that these remedies are as ancient as the year 1540, and that they have been recommended at various periods down to the time of Dr. Chretien, whose preparation, viz. the muriate of gold and soda, is employed by the author. We only quote him in order to inform such of our readers as are disposed to put this remedy to the test of experience, that it is usually employed in frictions on the tongue, beginning with the fourteenth part of a grain, and gradually increasing it to the eighth: sometimes it is also administered in very minute doses internally: copious sweats, or a great flow of urine, are the effects of the medicine on the animal economy. The quantity required for the use of secondary symptoms appears to have been from six to twelve grains.

Lond. Med. and Phys. Journ. Jan. 1826.

16. *Non-mercurial Treatment of Syphilis.*—In a late number of Gräafe's and Walther's Journal, we find an article by Dr. Otto, of Copenhagen, on Syphilis, particularly the treatment of it without mercury, and the prevalence of this practice in England, in which Dr. O. has drawn the following conclusions.

1. That the cure of syphilis, without mercury, has been asserted by so many authorities, that the fact can no longer be doubted. If then the disease could formerly be cured without mercury, it may certainly now be much easier, as it has lost much of its violence and obstinacy.

2. Syphilis can undoubtedly be radically cured in this manner; but then the cure is of longer duration, and the diet requires considerable restriction.

3. The secondary symptoms, and a return of the complaint, are certainly more frequent; but the symptoms are not so difficult of removal, and the treatment has a much more speedy effect.

4. As the treatment without mercury requires a longer time, it appears more practicable in hospital than in private practice; and, on the other hand, the patient can be better watched in a hospital, which, on account of the diet, is of great importance.

5. "As ulcers on the genitals are often not syphilitic, and the use of mercury is contraindicated from a predisposition to scrofula or phthisis existing in the individual, it is consolatory to learn, from the results of expe-

rience, that this medicine is not always necessary, and that a radical cure, by more simple and innocent means, can sometimes be effected. Where, however, the physician is anxious to avoid the possible evils which mercury is capable of producing, and also avoid loss of time, there remains a middle way, namely, to employ mercury—whose specific action can scarcely be denied, in moderate doses."

17. *Tetanus.*—This disease has been successfully treated in a horse, on the plan of O'Beirne, of Dublin, by injections of tobacco. It was given in the form of enemata, one ounce to the quart of boiling water. It produced stools when nothing else would: the discharges were black and fetid.

18. *The Pulp of the Andansonia Digitata in Phthisis.*—This tree, which grows to the circumference of 60 to 78 feet, is a native of Africa. Its pulp, made into a linctus, has been found to be useful in phthisis.

19. *On the Prussic Acid.*—Dr. Elliotson observes, "I may, perhaps, be permitted here to state, that very extensive experience with prussic acid for four years has fully confirmed all I published respecting it in the work referred to,* and has not furnished me with any additional information, except that it is equally successful against violent and chronic hiccup as against other symptoms of disordered stomach; and that it will in some cases cause ptyalism and irritation of the mouth, as noticed by Dr. Macleod.

Edinb. Med. and Phys. Journ.

20. *An account of the present state of Medicine in Italy.* By Fr. W. Oppenheim, M. D.†—The above is the title of an article in a late number of the Magazine of Foreign Literature, an excellent medical work, edited at Hamburg, by Dr. Gerson and Dr. Julius. It contains much interesting matter, from which we have made a selection, calculated to give a correct idea of the state of medical science in Italy, and to serve as a guide to those who visit that country for the purpose of adding to their stock of professional information.

Our author describes the Institutions of the Italian States, according to the order in which he visited them, beginning with the kingdom of Sardinia, in which there are two Universities, one at Genoa and one at Turin.

In the Genoese University ten professors are employed in teaching the different branches of Medicine and Surgery. None of these professors, however, enjoy much celebrity; practical anatomy is shamefully neglected, and there is no anatomical museum. The languishing state of science in this University, is attributed by our author to its being under the direction of the Jesuits, who are in possession of its revenues, and expend considerable sums in the purchase of theological books, while they almost entirely neglect, or give but little encouragement, to the cultivation of Natural History, Comparative Anatomy, and the other departments of medical education. During the short-lived constitution of thirty days, the students ranked themselves on the side of the anti-royalists, in consequence of which, the University was closed for three months, upon the return and restoration of the king.

The population of Genoa amounts to 90,000. It has two civil, and one military hospital, besides a work-house.

The *Ospedale Pammatone* is very large, and externally resembles a palace more than a hospital. Its pillars, stairs, and balustrades, all of Carara marble, lead the stranger to expect a commodious interior. But here he is miserably disappointed, and finds a total want of every thing suited to promote the health or comfort of the patients. The wards are very spacious, but badly lighted, imperfectly ventilated, and extremely filthy. The floors are

* Numerous Cases illustrative of the Efficacy of the Hydrocyanic or Prussic Acid in Affections of the Stomach, &c. 1820.

† This article is taken from the Edinburgh Medical and Surgical Journal, for January, 1826.

made of tiles, half worn out, and scarcely ever cleaned. The bedsteads are of iron, have no curtains, and are ranged in three rows, two of which are so close to each other that they touch.

The patients are attended by nuns, belonging to the order of *Nostra Donna del Rifugio.* Three physicians and four surgeons are attached to this institution, which has 1600 beds, but is capable of containing 4000. When our author visited it in 1824, the number of patients amounted only to 826. Post mortem examinations are here very rare, and the anatomical cabinet consequently very poor, containing only about a dozen dried preparations, and one skeleton! In 1821, the admissions amounted to 9344; the proportion of deaths to recoveries as 1 to 6.

Ospedale degli Incurabili, is a handsome but badly situated building, containing 1000 beds, and destined for the reception of the aged, the poor, and the insane. Patients of the latter description occupy a separate wing of the building. Their wards are spacious, but here again we meet with three rows of beds: and our feelings revolt at the situation of these wretched beings, the greater number of whom are chained hand and foot to their iron bedsteads! Where such a mode of coercion is employed—where the strait waistcoat is unknown—where the physicians, Drs. Isola and Timoni, (we wish not to conceal their names), hurry daily through this abode of misery, without giving a single direction to the nurse-tenders concerning the treatment of the patients, can we wonder that a cure is scarcely ever effected? We are sorry to find, that disgusting as such a scene must be, it is even surpassed in an asylum at Vienna, where Dr. Oppenheim has seen the lunatics not only chained, but caged, like beasts in a menagerie!

We feel particularly anxious that such a state of things should not exist unknown, and consequently unredressed. What Dr. Oppenheim has already disclosed to our professional brethren in Germany, we think our duty to publish in Great Britain, in the hopes of thereby contributing to promote a reformation in the treatment of lunatics in Italy, the first step to a reformation being to attract public attention to the extent and nature of the abuse. While we feel it our duty to record this barbarous treatment of lunatics in one of the first cities in Italy, we are yet far from wishing to stigmatize the Italian character as inhumane, or their physicians in general as ignorant, for we ourselves recollect the existence, and that at no very distant period, of abuses not less enormous in Great Britain.*

Dr. Oppenheim is doubtful whether to attribute to absolute want, or a degraded state of national character, the alms-begging which prevails in the Italian hospitals. "As I passed each bed," he observes, "its sickly tenant stretched forth his meagre arms to implore for charity!"

Albergo dei Poveri, a splendid building, adorned with costly architectural ornaments, but deficient in more essential qualities. It contains 2000 per-

* For an account of the dreadful and even appalling abuses in British Lunatic Asylums, see an article on that subject in the Edinburgh Review, August 1817. See also the Report of the Committee appointed by the Irish House of Commons, to examine into the causes of the mortality observed among the children admitted into the Foundling Hospital in Dublin. Two-thirds of the children admitted perished from neglect or maltreatment. The cause of death in many cases was opium, in the form of a mixture, left in the hands of the nurses, who administered this *sedative* when the children became uneasy, or cried perhaps from hunger. Great numbers of *healthy* children were put at once into the condemned or venereal ward, in which, of course, no wet nurses were employed, and the infants were so negligently attended, that a majority of them perished in the course of a few days. This practice had existed for many years, during which it was *proved* to have been fatal to many thousands. The physician of the hospital, during that period of infantine slaughter, obtained the name of Herod the Great.

sons, consisting of the poor, the aged, and many orphans. The internal management of this institution is much better than that of those already described. The paupers and orphans appeared clean, well clothed, and well fed.

In Genoa there are also a military hospital containing 800 beds, and an institution for the instruction of the deaf and dumb. The latter was founded in 1801, by the Abbé Octavius Assarotti, who still presides over it, and pursues nearly the same mode of instruction as is usual in France. In Italy, as elsewhere, this malady has been observed to be much more frequent among the poor than among the rich. The state of this institution, which contains twenty boys and twelve girls, is highly creditable to the Abbé.

Turin, for a population of 80,000, has four civil hospitals. That of S. Giovanni is the largest, being capable of containing 600 patients. But at the time of Dr. Oppenheim's visit, there were not more than 200 in it. The wards are large, and well ventilated. The proportion of deaths to recoveries, out of 4557 patients admitted in 1821, was as one to seven. There is a clinical ward in this hospital, containing twenty beds.

Casa dei Pazzi contained 260 lunatics, of whom more than one-third were chained. Their situation seemed even more deplorable than that of their fellow-sufferers at Genoa. Although there are three physicians and three surgeons attached to this asylum, yet Dr. Oppenheim could not discover that any curative measures were ever employed.

The University of Turin has eleven medical and surgical professors. The number of medical students generally amounts to nearly 100. The medical practitioners of the kingdom of Sardinia are much divided as to the systems they pursue. The juniors, who have studied in Paris, adhere in general to the doctrines of Broussois. Some of the seniors are still Brunonians; and what is singular, the younger Rasori has many fewer followers than might be expected.

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The Grand Dutchy of Tuscany has one University at Pisa, and three medical academies, viz. at Florenz, Pistoia, and Sienna. In order to obtain a license to practise, the students must not only have attended an hospital in one of the above towns for seven years, but must have practised during that period under the direction of the clinical professor, and must finally submit to an examination. Even those who have taken the regular academical degree of M. D. elsewhere, must attend one of the Tuscan hospitals for two years, before he is allowed to enter on private practice.

The academies at Pistoia and Sienna are too inconsiderable to claim attention. Our author therefore passes at once to the University of Pisa, which has nine Medical and Surgical Professors. There is here, however, no school for teaching midwifery.

The University building is small and inconvenient, and contains a few lecture rooms, besides an Anatomical and Surgical theatre, but the latter is so badly lighted, that most of the operations are performed in the former.

The medical courses commence in November, and conclude in August. The students of medicine amount to about 200, of whom many are Greeks. Dr. Oppenheim had an opportunity of hearing one of the lectures on Anatomy, and declares it was the worst he ever heard.

We shall give our author's account of Medical Institutions at Pisa, in his own words.

"Ospedale Santa Chiara é Casa dé Trovatelli contains 300 patients, the wards are clean, spacious, and lofty. The medical and surgical patients, in this as in the other Italian hospitals, are not separated from each other, but lie in the same ward. There is a clinical ward with twelve beds for the treatment of medical cases, under the direction of Professor Morelli, besides one for surgical cases, under the direction of Professor Vacca Berlinghieri. The attention of these professors is not however confined to the clinical pa-

tients, for they make remarks upon every interesting case in the hospital. The surgeon's visit is made at seven in the morning, the physician's at ten. The hospital pupils here, as in all the other Tuscan schools, wear a particular uniform, consisting of a red surtout, and a white apron; as the domestics of the hospital are similarly dressed, they are scarcely distinguishable from the students. Professor Vacca Berlinghieri is extremely polite to strangers, and is very communicative upon professional subjects. I shall relate what I saw and heard while in his company. His method of lithotomy* is well known, from his three memoirs on that subject. His success has undoubtedly been considerable; for of 29 patients upon whom he has operated, he has lost but two, and of these, one was more than 64 years old. I saw two persons upon whom he had operated; one was a boy four years old, who had been cut for the stone five days before. He seemed to be doing well, the greater part of his urine being already voided through the urethra, while the wound was beginning to heal. The other was a very melancholy case of a young man, on whom the operation had been performed fourteen weeks previously to my visit. The stone had been broken in the first attempt to extract it, and the fragments were successively removed, great care being taken by the Professor to leave no part of it in the bladder. He used injections and every other usual precaution, but nevertheless, and although the wound had assumed an healthy appearance, the patient complained of calculous pains on the twelfth day, when the Professor discovered another piece of the stone in the bladder. In removing this he made no new incision, but merely dilated the original wound with his finger. This fresh irritation caused a violent inflammation of the parts, and the swollen part of the rectum, which had performed the office of a valve in preventing the feces from entering the bladder, sloughed away, so that a fistulous opening was formed between the rectum and the bladder, and the urine was consequently evacuated partly *per anum*, and partly through a catheter introduced into the urethra. When the catheter was introduced only as far as the neck of the bladder, the urine flowing through it was mixed with fecal matter, but when it was pushed higher, towards the fundus, the urine was natural. When I saw the patient, he was less hectic than he had been, but still the fistulous opening in the rectum remained; its calibre was however diminished. When this operation had been revived in France by Sanson, and improved in Italy by Vacca, who merely makes an incision into the neck of the bladder, it excited much attention, and was practised by many French and Italian surgeons with considerable success. Scarpa however urged many objections against its safety, the most important of which was the danger of wounding the vesiculæ seminales. To this Vacca replied by stating, that of eighty patients thus operated on, none had felt a diminution of their sexual powers. It is very remarkable, that so celebrated a surgeon as Dupuytren should have so suddenly changed his opinion concerning the propriety of this operation. He now declares himself decidedly hostile to it; and yet, when I was in Paris in 1823, he was quite enthusiastic in its favour, for I heard him say, that the number of patients who suffered from a fistula after this operation, was not greater than that of those who died after any other!

"Calculous complaints are very rare in the neighbourhood of Pisa, and the majority of cases operated on by Vacca come from Bologna, Genoa, and the Piedmontese countries, whose population subsist almost entirely on vegetable nutriment; a fact proving that the formation of stone does not depend upon a superabundance of nitrogen.

"Diseases of the large arteries are so unfrequent at Pisa, that there had been no operation there for aneurism during ten years."

To be continued.

* He opens into the bladder from the rectum.

21. Dr. Mackintosh's *case of Calculus extracted from the Female Bladder.*—Mrs. Watson, aged 58, states, that she has been afflicted with the ordinary symptoms of stone for fourteen years, which have lately become very severe. After having been under the care of several medical men who did not suspect the presence of a calculus, she applied at my Dispensary for relief, and was attended by one of my most zealous and intelligent pupils, Mr. Giffney. In a few days he suspected the existence of a calculus, which was confirmed by the sound; and the patient was extremely anxious to have the operation performed as soon as possible. The tent used was that prepared with wax. The first was introduced by myself, and produced very great pain; it fell out in eight hours, and was found unchanged.

Mr. Giffney introduced another next day, which was also discharged without any increase of size—of course without producing any dilatation. In this way the three first days were lost, during which she suffered very considerable pain and irritation, to relieve which large opiates were used—and she lost the use of the left leg. The external parts of generation became much swelled and painful.

On the third day, Mr. Giffney made the sponge-tents with tallow instead of wax, doubling their size each time they were changed. The dilatation went on so well, that on the fifth day Mr. Giffney reported to her, that he could with ease introduce the fore-finger into the bladder. But as we knew that the stone was a large one, the tents were continued till the eighth day, when it was determined to attempt the extraction.

On making an examination, the urethra was found to be so much dilated, that the index finger was easily introduced into the bladder, and the stone felt. I found there was no necessity for employing a metallic dilator, which had been provided. The forceps were then introduced, and the stone after some little difficulty laid hold of, but as it was by the long axis, the instrument slipt. The second attempt was more successful, and the stone extracted with more ease and less pain than could have been anticipated. Mr. Syme, Dr. Duffin, and Dr. T. Spens, junior, were present, together with several of my pupils. The patient passed a good night, and next day the sphincter of the bladder had recovered so well, that she was enabled to retain her urine for several hours without inconvenience, and has only twice passed it involuntarily since. On the first of June, twenty days after the operation, she describes her state of health as being perfectly re-established, has no pain in the region of the bladder, can retain her urine and pass it at pleasure; and regrets the fourteen years previous suffering, the quantity of medicines she had taken without relief during that period, and the amount of the bills she had paid for medical advice, to regular as well as irregular practitioners.—*Edinburgh Med. and Surg. Journal, July.*

22. *Account of two Cases of Tic Douloureux, cured by the external use of the Atropa Belladonna. By* — Henry, *Esq. Assistant Surgeon, 66th Regiment.*—Case I. Serjeant John Gale, hospital-serjeant, 66th regiment, thirty-nine years of age, delicate, subject to inflammatory attacks, went to bed on the night of the 2d of March, 1824, quite well. He awoke with a strange pulsation and tingling over the right eye-brow, which soon increased to a sensation of heat and soreness, and at length to a most excruciating pain, extending across the temple and shooting down the cheek. This was attended with an involuntary constriction of the eye-ball, and a copious effusion of tears. The focus of the pain appeared to be the supra orbitary foramen of the os frontis. The paroxysm lasted two or three minutes, when there was an interval of partial, and sometimes complete, ease, for five, six, or ten minutes; then the same symptoms recommenced, and, after four or five hours of alternate torture and comparative happiness, the disease ceased, having worn itself out. The forehead and temple remained numb, and tender to the touch, the day after.

The night of the 3d March was passed by the patient in the same way as the former, and the paroxysms were even more severe.

Dr. Burton, surgeon 66th regiment, and the writer, attended the man: From a belief that the disease was in some way connected with vascular fulness in the system, as well as topical congestion, (the man's face being very florid,) the depletory plan was carried into effect. Blood in considerable quantities was abstracted, generally and locally; the bowels were briskly purged; blisters were put on the right temple, and behind the ear. The patient was confined to bed, and kept on spoon-diet; and all sources of nervous irritation were carefully avoided.

Notwithstanding that this method of cure, (apparently so plainly indicated by the symptoms,) was carefully carried into effect, under the superintendence of Dr. Burton, the patient derived very little advantage from it. The attack came on regularly every night; his health was suffering much; and at length we began to think of dividing and removing a portion of the frontal filament of the ophthalmic branch of the fifth pair of nerves, where, without doubt, the disease was seated. The paroxysms had neither been reduced in frequency nor moderated in violence.

The writer moistened about ten grains of the extract of belladonna with a few drops of water, and, during a violent paroxysm, rubbed the paste over the eyebrow for about three minutes, as near as he could judge, where the frontal nerve emerges. *The result was an instantaneous abatement of the pain.* It returned, however, in half an hour; but on that night (which was the twelfth from the first attack) the patient slept better, and had fewer and shorter fits of pain, than on any preceding one since the commencement of his illness. The same application was repeated, on the next night, with similar good effect. On the fourteenth night there was an intermission. On the fifteenth the medicine was again used, and the patient passed the night tolerably well. The disease continued to yield; and, finally, in three weeks the man was quite free from tic douloureux.

It must not be concealed, however, that, since the above period, Serjeant Gale has had two-three twitches in the same nerve, but not productive of any serious inconvenience or pain. So convinced is he of the good effect of the belladonna, that, on these occasions, he has had recourse to it of his own accord; and he states that it has always relieved the pain in his eyebrow.

Case II.—Mrs. Margaret M'Kim, a lady residing at Ballimar, within a mile of Sligo, fifty years of age, plethoric, but healthy, was attacked with a sensation of creeping and tingling over the right eyebrow, on the evening of the 26th March last, which gradually changed into a convulsive movement of the levator palpebræ and orbicular muscles, with lancinating pain over the brow, radiating from it across the temple and down the cheek, up the forehead, and into the orbit of the right side of the face. The acuteness of the pain continued only three or four minutes,—was followed by about a quarter of an hour's ease, and then came on as bad as ever. It was so extremely distressing, that during seven nights sleep was altogether banished; and the patient was quite miserable during the day, in the anticipation of what awaited her at night.

About the size of a pea of the extract was moistened with a little water, and rubbed with the finger over the seat of the most excruciating pain at the supra-orbital foramen. The friction was continued about five minutes, when the iris of the right eye became considerably expanded; it was then discontinued. In less than ten minutes the lady exclaimed, "I feel no pain!"

About five minutes more elapsed, when the convulsive twitchings of the muscles of the eyelids also ceased; and from that hour till the present the patient has not had the slightest return of the disease, and is now in excellent health.—*Lond. Med. and Phys. Journal, June*, 1825.

23. *Case of Lithotomy performed by* M. Clever *on himself.*—M. Clever

had suffered from the stone from his infancy, and had undergone the operation five times, and was now enduring, for the sixth time, the torments of this painful malady: he, therefore, determined upon immediately relieving himself; and placing himself before a looking-glass, and raising the scrotum with one hand, he plunged the point of a bistoury perpendicularly into that part where the operation is usually performed; after resting a moment, he prolonged the incision through the integuments, and put his finger into the wound, hoping to feel the stone, but he found the division he had made imperfect; he therefore again had recourse to his bistoury, and completed the section: then, with the assistance at first of one finger, and afterwards of two, he searched for and extracted a stone as big as a large nut. The urine flowed in abundance; he dressed his wound, and slept soundly. The next day, M. Clever informs us, he was as gay as if nothing had happened. Many medical men, and others whom he knew, astonished at the account they heard, went to see him, in order to be assured of the fact; and among the number was Professor Beclard, who examined the stone. M. Clever recovered perfectly. The stone, when examined, appeared to owe its formation to a piece of sponge-tent, with which the wound in the former operation had been plugged.—*Anders. April*, 1825.

24. *Case in which a New Method of Performing the Lateral Operation of Lithotomy was practised with success, by* JAMES T. WILKINSON, *Member of the Royal College of Surgeons in Ireland.*—Having lately performed the lateral operation of lithotomy in a manner different from the common method, I take the liberty of submitting for your consideration, the case and the circumstances which led me to deviate from the usual mode of operating. The subject, a boy of eight years of age, had been afflicted four years with the disease, and, along with the usual distressing symptoms, had, at every effort to make water, a protrusion of the rectum to a considerable extent, which became much thickened and diseased. Upon the introduction of the staff into the bladder, the water came away, and with the effort the rectum protruded, and all the propelling muscles were put strongly into action. I felt the end of the staff which was in the bladder to be forcibly closed upon by its contraction, and was convinced that it would be altogether impossible to introduce any of the usual cutting instruments into the bladder without wounding its fundus. Thus circumstanced, it occurred to me that a probe-pointed bistoury might be introduced through the neck of the bladder, and the parts divided from within outwardly, the back of the knife in the mean time removing the folds of the bladder out of danger.

The external parts having been divided in the usual way as for the lateral operation, I cut into the groove of the staff through the membranous portion of the urethra, and having reached the neck of the bladder, I exchanged my scalpel for a curved bistoury with a button point, fitting the groove of the staff. It had also a sharp point, which was moveable. Having passed this instrument along the groove of the staff into the bladder, I felt in the external wound for the button of the bistoury, and having fixed it in a situation which I deemed favourable, I pushed forward the moveable point through the bladder upon my finger, and then withdrew the knife in a direction corresponding with the external wound; a stone about the size of a walnut, and resembling it in external appearance, was extracted, and the patient became perfectly well, without any further inconvenience.

I have a second time performed the operation in a similar manner, and with the same success: I have also performed it upon the dead subject, and afterwards dissected the parts, and found, that the parts divided are those intended to be divided by the lateral operation, and that the usual accidents are altogether avoided.—*Edinburgh Medical and Physical Journal, for January*, 1825.

25. *Effects of Belladonna in preventing the Communication of Scarlatina* (*Arch. Gén. de Méd. Juin*, 1824. v. 270, *et Journ. Complément. Juin*, 1824. xviii. 369.)—The alleged discovery of the anti-scarlatinous properties of Belladonna, (if we may be allowed to fabricate a name to designate a fact, which is rapidly gaining belief on the Continent), was made in 1807 by Hahnemann of Leipsick. A favourite doctrine of that writer, and one which has its admirers in Germany was, that diseases are to be combated by remedies, the effects of which are similar to the symptoms of the diseases for which they are given. To this doctrine he gave the name of *homæopathia*. He had remarked that the belladonna when given in small doses produces heat and dryness in the throat, swelling of the submaxillary glands, and a cutaneous eruption, sometimes consisting of a mere efflorescence, sometimes composed also of papulæ like red miliaria; and his doctrine of the *homæopathia* led him to infer that this drug might prove a preservative against scarlatina, which produces symptoms essentially the same. It appears that the visionary hypotheses with which he overloaded his observations kept these statements long from public notice; until a severe epidemic of scarlatina began to lay waste various cities of Germany about ten years afterwards; and then the attention of physicians was attracted to the means of arresting its progress. The two Journals whose names are at the beginning of this article, supply us with extracts from the Memoirs of five German writers on the subject, and with an original essay by Dr. Koreff, Professor of the University of Berlin. From these we shall extract a short account of the facts, leaving our readers to judge for themselves of the credit they deserve, and hoping that they will put to the test of British experience a statement, which every one will allow to be of vast consequence in the practice of the healing art. Berndt of Custrin, who was the first to make a connected series of experiments, says, that in the epidemics of scarlatina which prevailed throughout that city in 1818 and 1819, he used the Belladonna as a preservative in children under fifteen years of age, and freely and continually exposed to the contagion; that of 195 cases, fourteen only were infected; and that, when he afterwards used a stronger preparation of the drug, every one escaped the disease. Dusterberg, a physician of Warberg, found that every child who took the belladonna for a sufficient length of time before exposure, escaped; and that whenever he left a child in an infected family to the care of nature, which he frequently did, that there might be no deception, the child was invariably attacked with the disease, while the rest of the family who took the drug escaped it. Dr. Behr of Bernberg states, that of 47 individuals who took the belladonna as a preservative, six only were attacked by the disease. Koreff, Professor of Berlin, affirms, from a very extensive and long-continued experience, that the most intimate intercourse may be kept up with patients affected with scarlatina, provided the belladonna be taken in the proper doses for eight or nine days before exposure, and be continued till the period of desquamation. Other statements to the same effect have been accumulated in the Memoirs alluded to; so that there is no want of authorities for the facts. The quantity given has generally been very small. The preparation employed was a solution of 3 grains of the extract in an ounce of *eau de cannelle*; and of this two or three drops were given twice a-day to a child under 12 months of age, one drop more for every year above that. In general no sensible effect is produced by it in such small doses; but sometimes it produces an eruption like that of scarlatina anginosa. Almost all the writers mentioned above agree, that even when it does not act as an absolute preventive, which generally arises from its having been taken for too short an interval before exposure, it nevertheless renders the attack much more mild; and if it has been taken for four or five days before exposure, the attack never proves fatal.—*Ed. Med. and Physical Journal*, 1825.

MEDICAL INTELLIGENCE.

METEOROLOGICAL OBSERVATIONS,

Taken on the western side of the Delaware, Lat. 39° 37.

JANUARY 1825.

	Sunrise,	P. M.	Winds.	Weather.	6 P. M.	REMARKS.
1	40	46	N. E.	cloudy, rain	42	In the night, wind changed N. W. and it commenced snowing. Early in the morning of the 2d the snow lay about two inches deep, in a half dissolved state, and froze, thus covering the whole face of the country with a sheet of ice.
2	24	27	N. W. strong	clear	26	
3	25	35	W. S. W. W.	clear	30	
4	20	35	W. S. W. S. W.	clear, hazy	32	
5	20	39	S. W.	clear	—	
6	—	44	W. S. W. S.	clear, hazy	39	
7	24	35	N. W. fresh, N. E.	clear, cloudy	33	
8	32	41	N. N. E. E. N. E.	cloudy, rain	40	
9	37	44	S. E. W. N. W. fresh	cloudy, loose clouds	37	
10	25	33	N. W. ——	clear ——	30	
11	24	37	—— S. S. W.	—— hazy	36	
12	30	—	S. W. ——	clear ——	—	Ice in standing ponds about 2½ inches thick.
13	—	—	—— ——	—— ——	—	
14	34	40	N. E. E. N. E.	rain	39	
15	38	51	S. E. S. W.	hazy, clear	47	
16	38	55	S. S. W.	—— hazy	52	Vernal weather.
17	44	50	W. N. W.	cloudy, clear	45	Ground clear of frost
18	32	41	N. W. W. N. W.	clear	38	
19	37	49	S. W. N. W.	clear	43	The Delaware completely free of ice.
20	29	42	N. W. N.	clear	39	
21	38	46	N. E.	hazy	40	
22	25	30	N. E.	cloudy	27	Great snow in Virginia and Carolina. None fell in this place during the month, except on the night of the first.
23	23	27	N. N. E. strong, N. strong	cloudy	25	
24	24	42	——	clear, hazy	39	
25	35	45	S. S. S. W.	cloudy, clear	41	
26	35	47	S. W. N. W. fresh	clear	42	
27	33	50	N. W.	clear	45	
28	32	52	S. W. S. S. W.	clear	48	
29	38	47	S. W. N. W. strong	cloudy, clear	30	About 10 A. M. the wind shifted to N. W. and from 12 to 6 P. M. the mercury fell 17°. Ground clear of frost.
30	18	32	N. W.	clear	29	Coldest day in the month.
31	24	43	W. S. W. S. S. W.	hazy, cloudy	40	

Mean temperature of the month, 36°. 5.

FEBRUARY.

	Sunrise,	P. M.	Winds.	Weather.	6 P. M.	REMARKS.
1	33	49	E. E. N. E.	hazy, cloudy	37	Rain in afternoon and evening. Snowed through the night very fast.
2	32	29	N. W.	Snowing at intervals all day	20	
3	18	22	N.W. strong. W.	loose clouds	20	Snow lies on the ground about 6 inches deep, with pretty good sleighing; the best for three years past.
4	9	25	W.	clear	21	Delaware shut up by floating ice.
5	13	26	S. W. S. S. W.	clear	31	
6	22	46	S. W.	clear	41	The warmth of today destroyed the sleighing.
7	29	50	S. W.	clear, cloudy	48	
8	32	33	N. E.	snow, cloudy	28	Very little snow fell, perhaps ½ an inch.
9	17	30	N. E.	clear, hazy	—	
10	29	45	W. S. W.	cloudy, clear	39	
11	34	39	N. E.	rain	38	
12	37	45	N. E.	cloudy, rain	43	
13	35	58	S. W. W. N. W.	foggy, clear	50	
14	37	52	N. E.	cloudy	—	Delaware navigable to Philadelphia.
15	36	40	N. E.	rain, cloudy	39	Some snow was mixed with the rain as it fell this morning.
16	35	46	S. W. W. S. W.	cloudy	43	
17	34	53	S.	cloudy	47	Delaware perfectly clear of ice.
18	37	51	W.	clear	46	
19	33	56	N. E. E. S. E.	clear	48	
20	37	39	E. S. E. N. E.	cloudy	34	Began to snow very fast after dark.
21	33	36	N. E. strong	snow and rain	35	
22	35	40	N. E.	snow and rain	38	
23	34	46	N. E.	cloudy	42	
24	33	55	S. W.	clear	50	
25	34	53	S. W.	hazy	50	
26	38	41	N. E.	rain	—	
27	34	46	N. E.	snow	36	Snow fell today uncommonly fast and in great quantities, but nearly all melted when it touched the ground.
28	27	—	N. N. W. N. W.	clear	—	

Mean temperature of the month 37°. 2.

MARCH.

	Sunrise,	P.M.	Winds.	Weather.	6 P.M.	REMARKS.
1	30	43	N. W.	clear	—	
2	31	40	N. E.	hazy	40	
3	38	46	E. N. E. E.	cloudy	43	
4	39	43	N.E. N.E. strong	cloudy	41	
5	39	45	N. N. N. W.	drizzle, cloudy	—	
6	42	55	N. W.	clear, scattered clouds	52	
7	35	48	N. N. W.	clear	44	
8	44	50	S.S.E. W.N.W.	drizzle, rain	50	
9	43	44	N. N. W.	rain	42	
10	34	48	W. N. W.	clear	44	
11	34	52	E. N. E. S. E.	hazy, cloudy	49	Rain in the night.
12	42	60	W. S. W.	clear	55	
13	41	61	N. N. E. N. E.	clear	56	
14	42	60	WNW. SE. fresh	clear	50	
15	38	58	E.N.E. S. fresh	clear	55	Weeping willow begins to appear green at a distance.
16	44	51	N. E. E.	rain	50	Thunder and heavy rain in the evening.
17	55	64	S.	cloudy, loose clouds	60	
18	50	59	W. N.W. fresh	clear	54	
19	39	57	NW. SSW. fresh	clear	—	
20	42	64	SW. S.W. fresh	clear	60	
21	45	51	N.E. N.	cloudy	48	
22	35	50	N.E.	clear	45	
23	32	54	S.E. S.S.E.	clear	49	
24	47	60	S.W.	cloudy	53	
25	45	42	E.N.E. strong	cloudy	41	
26	39	40	N.E. strong	storm and rain	39	
27	35	50	W. N.W. strong	loose clouds	—	
28	34	45	N.W. fresh	clear	41	
29	30	51	N.N.W. S.S.E.	clear	47	Thin ice; ground slightly frozen.
30	40	45	S. E.	cloudy, rain	45	Heavy thunder and rain at night from the S. W.
31	53	66	S.W. W.S.W. strong	loose clouds	57	Apricot tree blossoms.

Mean temperature of the month

I have been induced to communicate these full length observations, on account of the rareness of such high temparature as they evince for these months, (particularly of the two first,) rendered more remarkable by the preceding winter having been of uncommon mildness; but although mild, reference to it in your journal will discover that it does not equal this one past.

The whole year 1824 is distinguished for warmth; for the spring, which was by the "weatherwise" expected to have been cold, proved moderate, and if not so forward as sometimes, by no means so backward as others, at least in our latitude; the summer, though not marked by much extreme heat, yet moisture abounding, and much cloudy weather, the morning temperature was proportionably increased, so that its mean heat was rather high; the autumn was one of our mildest and driest, and December, the remaining month of the year, proved of extraordinary warmth. The winter of 1825 succeeded, and the mildness continuing or increasing, it stands an instance without a precedent in the history of our climate. To what can we attribute this change in our air? Not to comets surely, for that is idle and absurd, yet found its way in many of our periodical papers; nor to the moon, at least without some better theory be invented than has ever yet appeared; nor do we think the obvious cause of increase of temperature, that clearing the forests throughout our country produces, though certainly plausible, is sufficient to explain it; since it has not happened gradually, as we would reason from that, but suddenly, as if the cause had but just began to act. The apparent manner in which this cause has operated, is by diminishing the West and Northwest winds, or perhaps more strictly by increasing those of the Northeast and of the South and Southwest; but the cause itself we consider as yet one without an appearance of explanation.

S.

(*To be continued.*)

Art. II.—*Plan of a Metereological Table.**

This plan of a Metereological Table is given for the imitation of those who wish to benefit science by contributing observations of this nature.

Year	THERMOMETER.								BAROMETER.								
Mon	Extr.		10		Mean of		The daily range.	The temp. spring water.	10 Mor		10 Ev.		Mean	Day		Night		Range in 24 hours.
Date.	Max.	Min.	Morn.	Even.	Max. & Min.	10 & 10.	Both.		Temper.	Pressure.	Temper.	Pressure.	Temper.	Pressure.	Elevation.	Depression.	Elevation.	Depression.

* From Rees' Cyclopædia.

1. We learn from our correspondent Dr. Gerson, of Hamburg, that the doctrine of Homoopathia, gains ground there rapidly. This theory prescribes remedies, which produce on the healthy system, symptoms similar to those of the diseases in which they are given; thus, valerian produces vertigo—it is therefore prescribed in head-aches with vertigo, &c. The medicines, according to this doctrine, are also given in very small doses. This theory is gaining ground in Prague and Leipsic. Artificial baths, similar to natural springs, are also considerably used.

The carotid has been tied, in the hospital at Hamburg, to diminish the supply of blood to a tumour, which nearly prevented swallowing: its extirpation was impossible; the tumour has not much diminished, though the difficulty of swallowing disappeared.

2. Dr. Joel S. Stevens, of New Gloucester, (Maine) has favoured us with the case of Obadiah Littlefield, in the town of Starks, (Somerset County) who received an injury of his back from the falling of a tree, with a fracture of one leg, on the fourth of December, 1815. He was confined to bed from December to April, during which time his thirst was excessive, drinking eighteen quarts of water daily, and living upon bread and milk in the usual quantity. This state of things continued till September, when he was seized with a fever, during which (twenty-seven days) he took no nourishment except cold water. In October, after his fever ceased, for three weeks he ate crackers softened in milk and water. He then began to call for fresh meat, of which he would eat from eight to ten pounds at a meal, with as much cheese and bread. In this manner he continued till summer, when he left off animal food, and lived upon gruel, which he took in large quantities. He took to eating animal food again in the winter, with enormous draughts of sweetened water. This was his constant course, summer and winter, till within three years of his death, when he lived upon meat and potatoes, with excessive quantities of sweetened water. For the last seven years before his death, he could not have a light nor fire in his room. His mind was as usual. He died on the 15th of December, 1825.

The liver was smaller than natural, of a dark colour, and very hard. The gall bladder was enlarged to three or four times its natural size, containing a fluid of a bright yellow colour. A small part of the pancreas only remained. The spleen not more than half its natural size, black, hard, and corrugated. The mesentery nearly wholly removed, we suppose by ulceration. The omentum scarcely visible, the kidneys much diseased. The viscera of the chest natural. We are sorry that no mention is made of the state of the urinary secretion.

3. Dr. Emmons, of Great Crossings, (Kentucky) has given us a communication on the application of blisters to the surface of a large ulcer, near the sterno cleido mastoid muscle, which was extending, and threatened the life of the patient. The secretion became natural, and the patient recovered. This remedy has long been known in Philadelphia: Dr. Physick applied it many years ago in the same manner.

4. In a report sent to us by a member of the Medical Society of Franklin County, (Pennsylvania) it appears that the Committee consisting of Drs. M'Clellan, Boggs and Byrne, have decided that Mr. Dean has the priority in the use of the mercurial ointment as a remedy in erysipelas. From many experiments made by the editor of this Journal, it appears that the lard is the active ingredient in the ointment. The mercury, as it produces salivation, is rather of disservice than otherwise.

5. *Formula for the preparation of Sulphate of Rhubarb, and some remarks on Rhubarb and its preparations*, by George W. Carpenter, Philadelphia.

Boil for half an hour 6 lb. of coarsely powdered Chinese rhubarb in six gallons of water, acidulated with two and a half fluid ounces of sulphuric acid, strain the decoction and submit the residue to a second ebullition in a like quantity of acidulated water, strain as before, and submit it again to

a third ebullition; unite the three decoctions, and add by small portions recently powdered pure lime, constantly stirring it to facilitate its action on the acid decoction. When the decoction has become slightly alkaline, it deposites a red flocculent precipitate, and the fluid is changed from a yellow to a crimson colour; the precipitate is then to be separated by passing it through a linen cloth and dried, after which reduce it to powder and digest in three gallons of alcohol at 36° in a water bath, for several hours at a moderate heat; separate this solution from the calcareous precipitate, and distil off three fourths of the alcohol, there then remains a strong solution of rhubarbine, to which add as much sulphuric acid as will exactly neutralize it; evaporate this slowly to dryness without having access to atmospheric air, the residuum will be of a brownish red colour intermingled with brilliant specks possessing a slightly pungent styptic taste, soluble in water, and its odour that of the native rhubarb.

This preparation is a concentrated form of that valuable cathartic, separated from the ligneous and mucous portions, and bears a similar relation to the crude substance as quinine does to Peruvian bark.

From the experiments which I made upon several varieties of rhubarb, I found the Chinese to be the most active, and that variety which has been denominated in the market Russian, and which commands double the price of the Chinese, produced about one half of this principle, and consequently is much less active than the former. This rhubarb in fact appears to be nothing more nor less than the English variety, suitable pieces of which have been picked, bored, rasped, &c. in imitation of the Russian, but which wants in degree all the characteristic properties of weight, solidity, compact fracture, and particularly the essential quality of cathartic energy, which are all so strikingly exhibited in the Russian variety, and in corroboration of which Dr. Paris, in his excellent work the Pharmacologia, under the article rhubarb, states that inferior kinds of Russian, East India, and English rhubarb, are artfully dressed up and sold under the name of Turkey, and I am well informed that a number of persons in this town known in the trade by the name of *Russifier's*, gain a regular livelihood by the art of dressing this article, by boring, rasping, and then colouring the inferior kinds; for which they charge at the rate of eighteen-pence per pound.—I had not an opportunity of making an experiment on the Turkey rhubarb as I could not procure what accorded with the physical characters of the genuine article. The difference in the medicinal activity of these several varieties must essentially depend upon climate and cultivation, as it is asserted by Dr. Rehman that they are the roots of the same species, rheum palmatum, (although all the dispensatories and pharmacologia consider them distinct species, and ascribe the Chinese to be the *rheum undulatum*, and the Turkey of the Rheum Palmatum) and it is established beyond controversy that climate and cultivation are two of the most powerful agents in modifying and altering the condition of vegetable matter.

On the preparation of spiced Syrup of Rhubarb.—Paris in his Pharmacologia states that water at 212° takes up twenty-four, and Thompson thirty parts in sixty, and by decoction its purgative qualities are destroyed, which decoction is extremely turbid and deposites a copious precipitate on cooling and will be decomposed by standing a few days, whilst alcohol takes up 2.7 from ten parts, without the mucous portion, and is perfectly transparent and will remain unaltered by keeping. Hence as water takes up a large proportion of mucous and inactive matters and as decoction destroys its purgative properties, I think a very important alteration might be made in the formula for the preparation of the syrup of rhubarb of the shops, by substituting a concentrated spirituous tincture of the rhubarb spices, &c. in place of the aqueous decoction of the same, and to add it near the conclusion of the formation of a syrup of proper consistence. The alcohol in this mode cannot be objectional, as it need not much exceed, if any, the

proportion of spirit in the former method to prevent the fermentation of the aqueous decoction, and if these circumstances are correct it certainly will be a more active and eligible preparation and well deserves the practical investigation of the faculty. This preparation does not enter the works of Paris or Thompson, but is given by Dr. Coxe in the late editions of his standard work, the American Dispensatory, in the manner now prepared, and is very extensively employed in this city, perhaps as much so as any other pharmaceutical compound, and if its activity could be increased it no doubt would be a desirable object; it now requires a large dose to be effectual and sometimes frequently to be repeated, insomuch that its use is almost exclusively confined to children, the dose for adults frequently exceeding two ounces which is certainly objectional and excludes its use in those cases where (if more active) it would be extensively employed to advantage.

Extract of Rhubarb.—This preparation according to the method now pursued is very feeble. The protracted heat necessary to evaporate the water and the absorption of oxygen, acts so unfavourably during its formation, that its purgative properties although not entirely destroyed are so greatly impaired that its use has become almost abandoned by the profession. By the following process, however, a much more active preparation may be obtained, and where the use of the extract is approved this will be found to possess the proper characters.

Take of coarsely bruised Chinese rhubarb lbj, digest in six pints of alcohol for seven days and filter, distil of the alcohol in a water bath to the consistence of thin honey, then evaporate to a proper consistence in a water bath saturated with muriate of soda.

By this process much less heat and time is required to evaporate the menstruum, and owing to the alcohol much less oxygen is absorbed, and an extract of much more activity thus obtained. This mode is certainly more expensive, but if the product is more effectual as a medicine, this small difference should not be objectionable, as most of the alcohol is saved by distillation, and in the preparation of all medicines a preference should be given to that method which will render them more active and effectual without regard to expense unless it be exorbitant and the difference inconsiderable, for I think at least where health is implicated, pecuniary interest should not be considered.

Our correspondent from North Carolina will find information on the subject of the disease of the uterus, the subject of his communication, in Burn's midwifery: emetics would have probably answered in the cases alluded to.

We learn from our friend Dr. Short, of Lexington, Kentucky, that the number of students there is two hundred and eighty-two this last session.

The constitution of the Medical Society of Franklin county, contains some articles which are highly creditable and certainly worthy of imitation by the other societies of the state; among others the expulsion of members for consulting with quacks, for dishonourable conduct, may be noticed. The formation of societies of this nature we think would have a tendency to root out this evil throughout the state.

6. *Summary of the Range of the Thermometer and Barometer, observed in New York, in* 1825.

	January.		February.		March.		April.	
	Ther.	Bar.	Ther.	Bar.	Ther.	Bar.	Ther.	Bar.
Max.	55	30.4	61	30.4	70	30.2	84	30.3
Min.	21	29.2	12	29.4	32	29.3	32	29.5
Med.								
Range.	34	1.2	49	1.0	38	0.9	52	0.8

	May.		June.		July.		August.	
	Ther.	Bar.	Ther.	Bar.	Ther.	Bar.	Ther.	Bar.
Max.	92	30.4	97	30.1	99	32.2	94	30.2
Min.	44	29.5	60	29.4	69	29.8	63	29.6
Med.								
Range.	48	0.9	37	0.7	30	0.4	31	0.6

	September.		October.		November.		December.	
	Ther.	Bar.	Ther.	Bar.	Ther.	Bar.	Ther.	Bar.
Max.	88	30.3	92	30.5	75	30.6	60	30.5½
Min.	52	29.6	38	29.7	25	29.6	6	29.4
Med.								
Range.	36	0.7	54	0.8	50	1.0	54	1 1½

In January,	15	clear	days.	In July,	24	clear	days.	Total number of clear days, 220
Feb.	12	do.	do.	Aug.	21	do.	do.	
March,	17	do.	do.	Sept.	20	do.	do.	
April,	15	do.	do.	Oct.	19	do.	do.	Leaving for cloudy, rain, snow, and fog, 145
May,	20	do.	do.	Nov.	22	do.	do.	
June	18	do.	do.	Dec.	17	do.	do.	
	97				123			365

The greatest range during the year, 93°.
The highest point being July 11th, 21st, and 23d, 99°.
The lowest point being Dec. 13th, 6°.

Of the Barometer, during the year, $1\frac{4}{16}$. ind.
in Nov. 5th, 33.6.
January, 2d, 29.2.